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dnaENVIRONMENTAL, LLC
111 West 9th Avenue | Anchorage, AK 99501
(907) 350-4897 phone | (866) 350-3569 fax
dnaenviro.com

April 13, 2020

Mr. Prathap Kodial
Crowley Fuels, LLC
201 Arctic Slope Ave.
Anchorage, AK 99518

Subject: Report for September 2019 Groundwater and Surface Water Sampling at the Eureka Lodge Aboveground Storage Tank Site; Mile 128 Glenn Highway, Alaska; ADEC File Number 210.38.006

Dear Mr. Kodial:

This letter summarizes the results of groundwater monitoring and surface water sampling conducted in September 2019 by DNA Environmental Consultants, LLC (DNA) at the Eureka Lodge Aboveground Storage Tank Site. The Eureka Lodge is located at mile 128 of the Glenn Highway, approximately a 2.5-hour drive from Anchorage, Alaska, and 30 miles west of Glennallen, Alaska (see Attachment 1, Figure 1). The aboveground storage tanks (ASTs) are located at approximately 61°56'17.39" north latitude and -147°10'20.73" west longitude, on the north side of the Glenn Highway, east of the Lodge (see Attachment 1, Figure 2). The site is located within Bureau of Land Management Public Land Survey Section 1, Township 21 North, Range 12 East, Seward Meridian.

PROJECT OBJECTIVE

The objective of groundwater and surface water sampling in 2019 was to collect additional data to determine if there is residual impact to groundwater or adjacent surface water related to a 2010 release of ten gallons of unleaded gasoline that occurred during supply-truck-to-tank filling.

SITE BACKGROUND

The Eureka Lodge has been selling fuel since at least 1948 (ERM 2018). The lodge and fuel tanks are owned and operated by the Eureka Lodge. The fuel tanks are filled as needed by Crowley. There are two fuel ASTs at the site: a west tank, with an 8,000-gallon capacity utilized for regular unleaded gasoline, and a 6,000-gallon duel compartment east tank comprised of a 2,000-gallon northern compartment used for supreme unleaded and a 4,000-gallon southern compartment used for diesel fuel. Both tanks are skid mounted.

In 2011, Crowley conducted site characterization activities at the Eureka Lodge to document potential impact related to a June 2010 release of ten gallons of unleaded gasoline. The site characterization activities included advancing eight soil borings, installing three groundwater monitoring wells (MW-1, MW-2, and MW-3), and sampling surface water at two locations (SW-1 and SW-2). Soil boring logs indicated groundwater in two of the eight boreholes. During June 2011 site characterization activities, monitoring

wells MW-1 and MW-3 did not charge once installed and could not be sampled. Laboratory results from the groundwater sample collected from MW-2, and surface water samples collected from the nearby unnamed lake, did not indicate contaminants of concern at concentrations greater than an applicable ADEC cleanup level (ERM 2018).

In September 2012, groundwater was sampled at monitoring wells MW-1, MW-2, and MW-3; surface water was sampled at intake location SW-1; and lake surface water was sampled at location SW-2. Analytical results for the groundwater samples were at concentrations less than the ADEC Table C cleanup levels. Analytical results for surface water were less than the respective Alaska Water Quality Standards (AWQS; ERM 2018).

In 2013, sampling at monitoring wells MW-1, MW-2, and MW-3 continued to indicate no contaminants at concentrations greater than associated ADEC Table C cleanup levels (ERM 2018).

In 2017, groundwater monitoring at wells MW-1 and MW-3 was conducted; MW-2 could not be located and was not sampled. At MW-1, DRO was detected at 3.7 milligrams per liter (mg/L), exceeding the Table C value of 1.5 mg/L. Surface water samples collected at the same time did not indicate an AWQS exceedance. The lodge's drinking water well was sampled with no impact reported (ERM 2018).

GEOLOGY/HYDROLOGY

The Eureka Lodge is situated at approximately 3,290 feet above mean sea level (amsl) and is surrounded by mountains. Located north of the lodge and ASTs is an unnamed lake with mountains beyond the lake rising to over 4,400 feet amsl. South of the site is the Glenn Highway and a steep drop off towards Eureka Creek. Based on the topographic map for the area, groundwater is expected to flow south. Soil at the site consists primarily of silt with gravel and organic material from 0 to 8 feet below ground surface (bgs) and silt with 5 to 10 percent gravel from 8 feet bgs to 20 feet bgs. Frozen soil was documented in many of the boreholes when they were installed in 2011, and groundwater was encountered in two of the eight boreholes at approximately 17 feet bgs. The other boreholes were dry (ERM 2018).

FIELD ACTIVITIES

DNA performed groundwater monitoring activities on September 6, 2019. Fieldwork was performed by DNA in accordance with the most recent ADEC-approved work plan (OASIS work plan as amended by ERM in 2017; OASIS 2012, ERM 2017). One deviation from the work plan occurred: the water sample collected from monitoring well MW-1 was submitted for the entire list of volatile organic compounds (VOCs) by United States Environmental Protection Agency (EPA) Solid Waste (SW) method 8260 instead of just four VOCs (benzene, toluene, ethylbenzene, and total xylenes (BTEX).

Field activities were documented in a bound logbook, with well purge and sampling information recorded on separate datasheets. Sample collection time, date, and location are summarized in Attachment 2, Table 1. All field documents are provided in Attachment 3. A photographic log is provided as Attachment 4.

All three monitoring wells (MW-1 through MW-3) at the site were gauged for depth to groundwater. Although only MW-1 and MW-3 were scheduled to be sampled, as MW-2 could not be found in 2017, DNA did find MW-2 during this sampling event and collected a sample from MW-2 for the full suite of analytical protocols.

Each well was then purged following the United States Environmental Protection Agency (EPA) low-flow (minimal drawdown) sample collection technique and then sampled.

All field work was conducted by Daniel Frank; Mr. Frank meets the ADEC's requirements of a qualified environmental professional per 18 AAC 75.333 and 18 AAC 78.088.

Field Observations

Water Table

Static water level measurements and calculated elevations are presented in Attachment 2, Table 2. Attachment 1, Figure 3 depicts the calculated water elevation at each well. Inferred isocontours were not developed, and the suggested gradient to the east is considered potentially invalid given the elevation data used was from a 2011 elevation survey that was not conducted by a state-licensed professional land surveyor.

Groundwater elevations were found to be within the screening interval for each monitoring well, with groundwater at approximately 11 feet bgs.

Water Quality

Water quality parameters recorded during the sample purge included temperature, conductivity, dissolved oxygen (DO), and oxidation-reduction potential (ORP). Turbidity was not measured, as the meter failed to properly calibrate during field work. Final parameter values recorded at the end of purging and prior to sample collection are summarized in Attachment 2, Table 3.

Water from all wells generally appeared non-turbid at completion of the purge. The color of purge water was clear, with no odor or sheening. The average temperature across the site was 3.59 degrees Celsius. Values for pH were normal and ranged from 6.60 to 6.69. Conductivity was between 229 and 327 micro-siemens per centimeter (µS/cm). Values for DO were between 5.32 and 8.82 milligrams per liter (mg/L), indicating aerobic conditions. Values for ORP ranged from 138 to 176 millivolts (mV).

Analytical Methods

All groundwater samples were submitted to SGS North America, Inc. (SGS), an ADEC-approved laboratory for the following analyses:

- Gasoline-range organics (GRO) by Alaska (AK) method AK101;
- Diesel-range organics (DRO) by AK102;
- VOCs by EPA SW 8260C; and,
- Polycyclic aromatic hydrocarbons (PAHs) by method EPA SW8270D-SIM.

All surface water samples were submitted to SGS for the following analysis:

- GRO by AK101;
- DRO by AK102;
- VOCs by EPA 624; and
- PAHs by EPA 625M-SIM.

Analytical Results

Groundwater

Laboratory results for groundwater samples are presented in Attachment 2, Table 4. The SGS laboratory report is included as Attachment 5 to this letter, and the ADEC Checklist and associated data quality assessment is included as Attachment 6.

Analytical results are compared to Alaska Administrative Code, Title 18, Chapter 75, Article 3 (18 AAC 75.345): Oil and Other Hazardous Substances Pollution Control (ADEC 2018), Table C, Groundwater Cleanup Levels (GCLs).

DRO was not detected at MW-2 or MW-3 but was reported at MW-1 at a concentration greater than the GCL in both the primary and the quality control duplicate sample; 4.77 mg/L and 5.28 mg/L, respectively.

No other compounds (GRO, VOCs or PAHs) were detected at any of the three wells.

Surface Water

Surface water samples are evaluated against AWQS criteria, found in 18 AAC 70, *Pollutant: Petroleum Hydrocarbons, Oils and Grease, For Fresh Water Uses*, and *Water Supply: Aquaculture* (ADEC 2017). Total aromatic hydrocarbon (TAH) is the sum of concentrations of BTEX isomers. Total aqueous hydrocarbon (TAqH) is the sum of concentrations of TAH (BTEX) plus the sum of concentrations of PAHs in the water column. Surface water samples were additionally compared to Table C GCLs. Attachment 2, Table 5 summarizes the laboratory data as compared to Table C GCLs, and Table 6 summarizes data as evaluated against AWQS criteria.

For all compounds except DRO, the laboratory reported non-detect. For DRO, the detected concentrations are less than the Table C GCL for DRO. For the TAH and TAqH evaluation, all compounds were reported as non-detect.

CONCLUSIONS AND RECOMMENDATIONS

Groundwater

Groundwater at MW-1 appears impacted with DRO. Sampling at MW-1 has occurred in 2011, 2012, 2013, 2017, and 2019. DRO was first detected at a concentration greater than the Table C GCL in 2017. The source of the DRO is likely impacted soil noted in the 2011 site characterization report, where a soil sample collected at 9 to 9.5 feet bgs during the installation of MW-1 contained 4,000 milligrams per kilogram of DRO. DRO was not reported in soil samples collected during the installation of MW-2 or MW-3 (OASIS 2011). The estimated groundwater gradient is to the east, but the elevation data used to estimate the gradient was not generated using a professional survey. The elevation of the nearby unnamed lake was not determined. However, elevation data generated in the past has indicated the lake is higher than the groundwater in the project monitoring wells. In 2017, elevation data suggested groundwater would flow to the north, with nearly a one-foot difference between MW-1 and MW-3. However, also in 2017, the lake elevation was found to be nearly five feet higher than either well, suggesting a gradient away from the lake (ERM 2018).

The aquifer in which the wells are located is considered unproductive, and this was observed again in 2019. Wells at the site are often dry, or if water is present, the collection of samples can lead to the wells purging dry. For 2019, a bladder plump was used, allowing for a lower flow rate that is often not achievable using a positive pressure pump. The very slow recharge in this area makes the aquifer in which the wells are installed unusable for any purpose. The formation at the site is composed almost entirely of dense silt with some gravel for at least the top 20 feet (OASIS 2011). This formation likely has a hydraulic conductivity ranging between 0.01 feet per day and 0.001 feet per day, with relative permeability ranging from semi-pervious to impervious (ERM 2018).

DNA does not recommend continued monitoring or sampling of groundwater at these wells because these wells are within a formation of nearly impervious silt and the migration of contaminants via groundwater is nearly impossible given the soil at this site.

Surface Water

Surface water at the site has been sampled in 2011, 2012, 2017, and 2019. There have been no reports of sheening, and all sample results indicate the unnamed lake is not impacted by any residual contamination left in place below the two ASTs. Additionally, MW-3, located between the area of residual impact to soil, has never tested positive for any contaminants that could cause a violation of AWQSs.

DNA does not recommend continued monitoring of surface water as there is no supporting evidence that impact could migrate to the lake. To the contrary, the lack of sheening, the consist measurement of the lake water elevation as higher than the groundwater elevation, and the impervious nature of soil in this area all prevent the migration of contamination.

Data Gaps

The ADEC has identified data gaps preventing closure of this site to further action:

- Petroleum contamination remains in the ground at concentrations greater than the Method Two Maximum Allowable Concentrations.
- Soil contamination has not been delineated fully to the south and to the west.
- Groundwater flow direction is not well understood.
- The new drinking water well requires more evaluation.

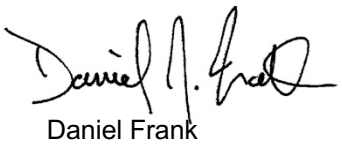
To address these data gaps, DNA recommends Crowley consider the use of Method Three to evaluate the actual risk of residual contamination at this site. As part of this effort, DNA recommends delineation of impact to the west and south using a combination of historical soil data and a field screening tool such as the Geoprobe® Optical Image Profiler (OIP). DNA acknowledges that multiple spills have occurred in the vicinity of the ASTs and that the site history extending back to 1948 or earlier. Further, there is no expectation that Crowley is responsible for this residual contamination. The expense of delineating a spill that is not Crowley's responsibility is an important factor in determining the need for further delineation of any pre-2010 releases by Crowley.

Groundwater flow is likely non-directional, with hydrostatic pressure from the unnamed lake preventing any northern migration, and soil structure preventing movement of the limited water that filters in from the

surface. Although all groundwater in the state is protected, the unusable nature of groundwater in the shallow regime at this location makes continued focus on the groundwater pathway unproductive.

The new drinking water well installed by the lodge is expected to be in a productive confined lower aquifer that is more than 100 feet west of the AST area. Past testing of this well has not indicated any hydrocarbon impact. MW-2 and MW-3 are located within 30 feet of MW-1 and have reported no impact in the past nine years, indicating migration of contaminants in the shallow silt is not a viable contaminant pathway.

Sincerely,
DNA Environmental Consultants, LLC



Daniel Frank
Principal

Attachments

1. Figures
2. Tables
3. Field Forms and Notes
4. Photograph Log
5. Laboratory Report
6. ADEC Checklist and Data Quality Report

REFERENCES

Alaska Department of Environmental Conservation (ADEC). 2018. 18 AAC 75, *Oil and Other Hazardous Substances Pollution Control*, October 27.

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ERM Alaska, Inc. (ERM), 2018. 2017 Monitoring Report, Eureka Lodge, Mile 128 Glenn Highway, Alaska. Final. May 24.

_____, 2017. Addendum to the 2012 Groundwater and Surface Water Monitoring Work Plan, Eureka Lodge, Alaska. ADEC Filed Number 210.28.006, Hazard ID 25595. September 8.

OASIS Environmental, an ERM Company. (OASIS). 2012. Groundwater and Surface Water Monitoring Work Plan, Eureka Lodge.

_____, 2011. Eureka Lodge Site Characterization Report, Mile 128 Glenn Highway, Alaska, ADEC File Number 210.28.006. October 7.

ATTACHMENT 1

Figures

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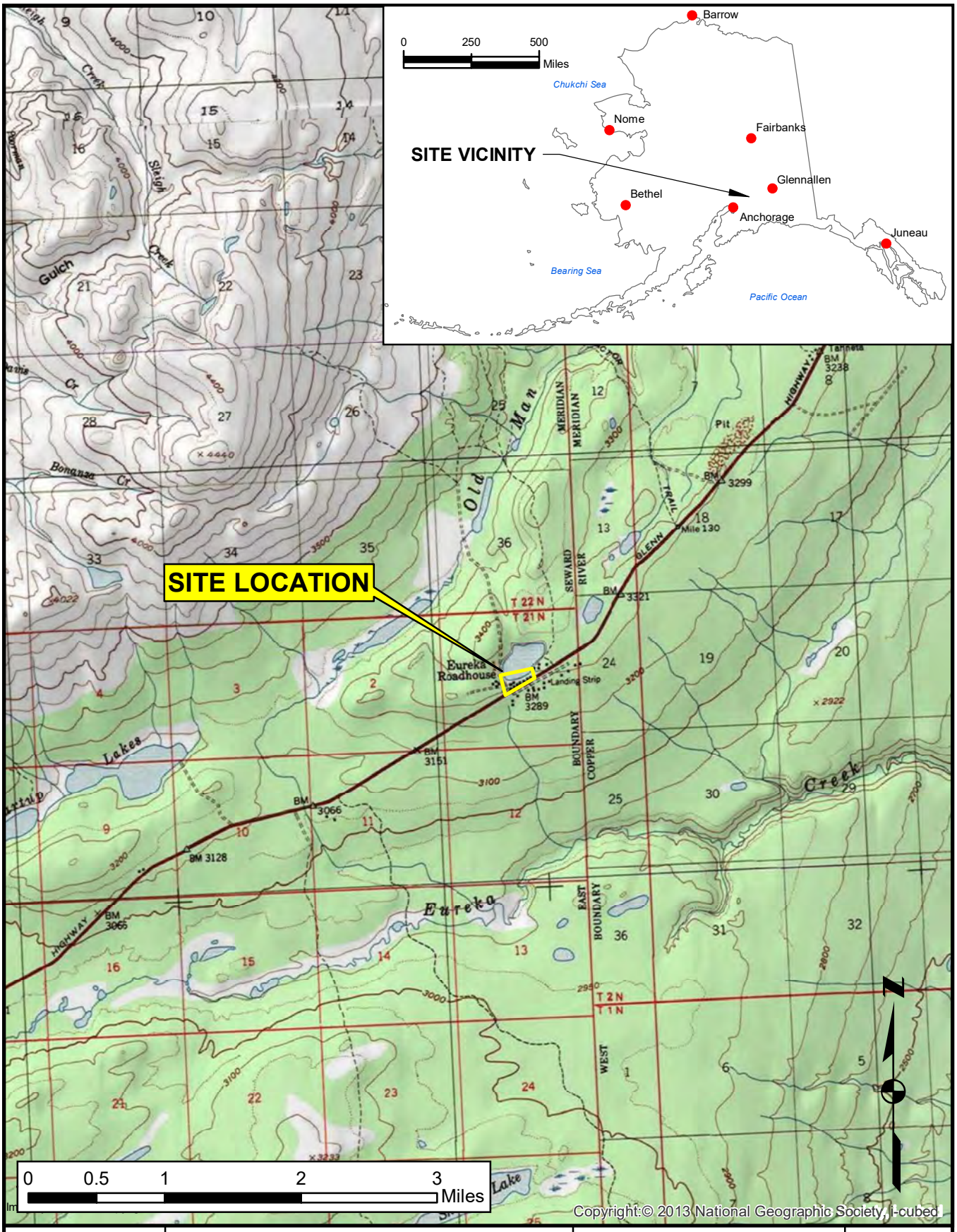

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September 2019 Monitoring Report
Eureka Lodge AST Site
Spill Number 10239916202
Mile 128 Glenn Highway, Alaska

Site Location Map

Figure 1

1 inch equals 1 miles

04/01/2020 | 19.CMS.08

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dna ENVIRONMENTAL	September 2019 Monitoring Report Eureka Lodge AST Site Spill Number 10239916202 Mile 128 Glenn Highway, Alaska	**Site Detail**	Figure 2
	1 inch equals 0.007 miles	04/23/2020 / 19.CMS.08 DRAWN: ECR / CHKD: DJF	

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Legend

- Monitoring Well
- Surface Water Sample

AST	above-ground storage tank
DRO	diesel-range organics
GRO	gasoline-range organics
mg/L	milligrams per liter
ND	non-detect
TAH	total aromatic hydrocarbon
TAqH	total aqueous hydrocarbon

Unnamed Lake

SW-2	9/6/2019
GRO (mg/L)	ND
DRO (mg/L)	0.369
TAH	ND
TAqH	ND

SW-1	9/6/2019
GRO (mg/L)	ND
DRO (mg/L)	0.469
TAH	ND
TAqH	ND

MW-3	9/6/2019
GRO (mg/L)	ND
DRO (mg/L)	ND
Groundwater Elevation*	83.80

MW-2	9/6/2019
GRO (mg/L)	ND
DRO (mg/L)	ND
Groundwater Elevation*	83.47

MW-1	9/6/2019
GRO (mg/L)	ND
DRO (mg/L)	**5.28**
Groundwater Elevation*	83.87

Drinking Water Well House

Eureka Lodge

Residence

East AST

West AST

0 30 60 120 180 Feet

NOTE:
* All groundwater elevations are based on an arbitrary datum of 100 feet.

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September 2019 Monitoring Report
Eureka Lodge AST Site
Spill Number 10239916202
Mile 128 Glenn Highway, Alaska

1 inch equals 0.007 miles

Laboratory Results Summary

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Figure 3

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ATTACHMENT 2

Tables

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TABLE 1: SAMPLE COLLECTION SUMMARY

Groundwater and Surface Water Monitoring Report – September 2019 Sampling Event
Eureka Lodge AST Site
Crowley Fuels, LLC
Mile Post 128 Glenn Highway, Alaska

Sample Location	Sample Number	Duplicate	Sample Date	Sample Time	Requested Laboratory Analyses					
					GRO (AK101)	DRO (AK102 LV)	VOCs (EPA 8260C)	PAHs (EPA 8270D SIM LV)	VOCs (EPA 624)	PAHs (EPA 625M SIM LV)
Groundwater										
MW-1	19-ERK-MW-01-01	✓	9/6/19	1345	✓	✓	✓	✓		
	19-ERK-MW-FD-01-01			1200	✓	✓	✓	✓		
MW-2	19-ERK-MW-02-01		9/6/19	1645	✓	✓	✓	✓		
MW-3	19-ERK-MW-03-01		9/6/19	1540	✓	✓	✓	✓		
Surface Water										
SW-1	19-ERK-SW-01-01	✓	9/6/19	1640	✓	✓			✓	✓
	19-ERK-SW-FD-01-01			1200	✓	✓			✓	✓
SW-2	19-ERK-SW-02-01		9/6/19	1700	✓	✓			✓	✓
Quality Control										
Rinsate	19-ERK-RB-01		9/6/19	1715	✓	✓	✓	✓		
Lab Provided	Trip Blank		--	--	✓		✓		✓	

Key:

ADEC = Alaska Department of Environmental Conservation
AK = Alaska
DRO = Diesel-range organics
EPA = United States Environmental Protection Agency
ERK = Eureka
FD = Field Duplicate
GRO = Gaslone-range organics
GW = Groundwater
LV = low volume
MW = Monitoring well
PAHs = Polycyclic aromatic hydrocarbons
RB = Rinsate Blank
RRO = Residual-range organics
SIM = Selective ion monitoring
SW= Surface water
VOCs = Volatile Organic Compounds

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TABLE 2: GROUNDWATER ELEVATION DATA

Groundwater and Surface Water Monitoring Report – September 2019 Sampling Event

Eureka Lodge AST Site

Crowley Fuels, LLC

Mile Post 128 Glenn Highway, Alaska

Well ID	Installation Date	Land Survey Details [1]				Well Design			Field Measurements					Water Elevation (feet AMSL)	Groundwater Interface within Screen Interval?
		Ground Elevation	TOC Elevation	Northing	Easting	Screen Length (feet)	Top of Screen (BTOC)	Bottom of Screen (BTOC)	Gauge Date	Depth to LNAPL (BTOC)	Depth to Water (BTOC)	TD (BTOC)	Depth to Water (BGS)		
MW-1	6/7/11	95.25	94.37	NS	NS	10.00	9.12	19.12	9/6/19	--	10.50	NR	11.38	83.87	Yes
MW-2	6/7/11	94.71	94.06	NS	NS	10.00	9.35	19.35	9/6/19	--	10.59	18.43	11.24	83.47	Yes
MW-3	6/7/11	94.62	94.11	NS	NS	10.00	9.49	19.49	9/6/19	--	10.31	19.51	10.82	83.80	Yes

Notes: All measurements are in units of feet unless otherwise indictated.

[1]Arbitrary Elevation Datum - 100 ft above mean sea level; on June 8, 2011 (elevation at site is approximately 3,300 feet AMSL).

Key:

-- = Not present
AMSL = Above Mean Sea Level
BGS = below ground surface
BTOC = Below top of casing, a.k.a. below measuring point
LNAPL = Light non-aqueous phase liquid
NA = Not available
NR = Not recorded
NS = No survey data
TD = Total Depth
TOC = Top of casing (PVC) meeasuring point

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TABLE 3: FIELD-COLLECTED WATER QUALITY DATA

Groundwater and Surface Water Monitoring Report – September 2019 Sampling Event

Eureka Lodge AST Site

Crowley Fuels, LLC

Mile Post 128 Glenn Highway, Alaska

Well ID	Purge/ Sample Date	Sample Method	Color	Odor	Temperature (°C)	pH	Conductivity (µS/cm)	Turbidity (NTU)	DO (mg/L)	ORP (mV)
MW-1	9/6/19	Bladder Pump[1]	clear	none	NR	NR	NR	NR	NR	NR
MW-2	9/6/19		clear	none	3.41	6.61	327	NR[2]	5.32	140.0
MW-3	9/6/19		clear	none	3.91	6.69	316	NR[2]	8.82	176.0

Notes: Above data is final reading after purge and before sampling.

[1] Geotech® stainless steel bladder pump (0.88"x19") with dedicated Teflon bladder; low-flow method.

[2] TTT rental turbidity unit failed to work.

Key:

°C = Degrees Celsius

DO = Dissolved oxygen

µS/cm = micro-siemens per centimeter

mg/L = Milligrams per liter

mV = Millivolts

MW = Monitoring well

NR = sample at MW-1 was collected without purging because of past low recharge.

NTU = Nephelometric Turbidity Units

ORP = Oxidation-reduction potential

SS = Stainless Steel

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TABLE 4: LABORATORY RESULTS SUMMARY - GROUNDWATER

Groundwater and Surface Water Monitoring Report – September 2019 Sampling Event

Eureka Lodge AST Site

Crowley Fuels, LLC

Mile Post 128 Glenn Highway, Alaska

Well ID:	ADEC Cleanup Levels	MW-1		MW-01 Dup		MW-2		MW-3		Equipment Blank		Trip Blank	
Project Sample ID:		**19-ERK-MW-01-01**		**19-ERK-MW-FD-01-01**		**19-ERK-MW-02-01**		**19-ERK-MW-03-01**		**19-ERK-RB-01**		**Trip Blank**	
Lab Sample ID:		1195276001		1195276006		1195276002		1195276003		1195276008		1195276009	
Collection Date/Time:		9/6/2019 1:45 PM		9/6/2019 4:45 PM		9/6/2019 3:40 PM		9/6/2019 4:40 PM		9/6/2019 5:00 PM		9/6/2019 12:00 PM	
Alaska DEC Fuels (AK102; mg/L)													
GRO C6-C10	2.2	0.0500	U	0.0500	U	0.0500	U	0.0500	U	0.0500	U	0.0500	U
DRO C10-C25	1.5	4.77		5.28		0.67	UB	0.488	UB	0.230	J	--	
VOCs (BTEX first; EPA 8260C; µg/L)													
Benzene	4.6	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U
Toluene	1100	0.500	U	0.500	U	0.500	U	0.500	U	1.01		0.500	U
Ethylbenzene	15	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
Xylenes (total)	190	1.50	U	1.50	U	1.50	U	1.50	U	1.50	U	1.50	U
1,1,1,2-Tetrachloroethane	5.7	0.250	U	0.250	U	0.250	U	0.250	U	0.250	U	0.250	U
1,1,1-Trichloroethane	8000	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
1,1,2,2-Tetrachloroethane	0.76	0.250	U	0.250	U	0.250	U	0.250	U	0.250	U	0.250	U
1,1,2-Trichloroethane	0.41	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U	0.200	U
1,1-Dichloroethane	28	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
1,1-Dichloroethene	280	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
1,1-Dichloropropene	--	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
1,2,3-Trichlorobenzene	7	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
1,2,3-Trichloropropane*	0.0075	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
1,2,4-Trichlorobenzene	4	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
1,2,4-Trimethylbenzene	56	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
1,2-Dibromo-3-chloropropane	--	5.00	U	5.00	U	5.00	U	5.00	U	5.00	U	5.00	U
1,2-Dibromoethane	0.075	0.0375	U	0.0375	U	0.0375	U	0.0375	U	0.0375	U	0.0375	U
1,2-Dichlorobenzene	300	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
1,2-Dichloroethane	1.7	0.250	U	0.250	U	0.250	U	0.250	U	0.250	U	0.250	U
1,2-Dichloropropane	8.2	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
1,3,5-Trimethylbenzene	60	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
1,3-Dichlorobenzene	300	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
1,3-Dichloropropane	--	0.250	U	0.250	U	0.250	U	0.250	U	0.250	U	0.250	U
1,4-Dichlorobenzene	4.8	0.250	U	0.250	U	0.250	U	0.250	U	0.250	U	0.250	U
2,2-Dichloropropane	--	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
2-Butanone (MEK)	5600	5.00	U	5.00	U	5.00	U	5.00	U	5.00	U	5.00	U
2-Chlorotoluene	--	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
2-Hexanone	38	5.00	U	5.00	U	5.00	U	5.00	U	5.00	U	5.00	U
4-Chlorotoluene	--	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
4-Isopropyltoluene	--	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
4-Methyl-2-pentanone (MIBK)	6300	5.00	U	5.00	U	5.00	U	5.00	U	5.00	U	5.00	U
Bromobenzene	62	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
Bromochloromethane	--	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
Bromodichloromethane	1.3	0.250	U	0.250	U	0.250	U	0.250	U	0.250	U	0.250	U
Bromoform	33	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
Bromomethane	7.5	2.50	U	2.50	U	2.50	U	2.50	U	2.50	U	2.50	U
Carbon disulfide	810	5.00	U	5.00	U	5.00	U	5.00	U	5.00	U	5.00	U
Carbon tetrachloride	4.6	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
Chlorobenzene	78	0.250	U	0.250	U	0.250	U	0.250	U	0.250	U	0.250	U
Chloroethane	21000	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
Chloroform	2.2	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
Chloromethane	190	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
Dibromochloromethane	8.7	0.250	U	0.250	U	0.250	U	0.250	U	0.250	U	0.250	U
Dibromomethane	8.3	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
Dichlorodifluoromethane	200	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
Freon-113	10000	5.00	U	5.00	U	5.00	U	5.00	U	5.00	U	5.00	U
Hexachlorobutadiene	1.4	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
Isopropylbenzene (Cumene)	450	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
Methyl-t-butyl ether	140	5.00	U	5.00	U	5.00	U	5.00	U	5.00	U	5.00	U
Methylene chloride	110	2.50	U	2.50	U	2.50	U	2.50	U	2.50	U	2.50	U
Naphthalene	1.7	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
P & M -Xylene	--	1.00	U	1.00	U	1.00	U	1.00	U	1.00	U	1.00	U
Styrene	1200	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
Tetrachloroethene	41	0.660	J	0.570	J	0.500	U	0.500	U	0.500	U	0.500	U
Trichloroethene	2.8	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
Trichlorofluoromethane	5200	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
Vinyl acetate	410	5.00	U	5.00	U	5.00	U	5.00	U	5.00	U	5.00	U
Vinyl chloride	0.19	0.0750	U	0.0750	U	0.0750	U	0.0750	U	0.0750	U	0.0750	U
cis-1,2-Dichloroethene	36	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
cis-1,3-Dichloropropene	4.7	0.250	U	0.250	U	0.250	U	0.250	U	0.250	U	0.250	U
n-Butylbenzene	1000	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
n-Propylbenzene	660	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
o-Xylene	--	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
sec-Butylbenzene	2000	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
tert-Butylbenzene	690	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
trans-1,2-Dichloroethene	360	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U
trans-1,3-Dichloropropene	4.7	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U	0.500	U

TABLE 4: LABORATORY RESULTS SUMMARY - GROUNDWATER

Groundwater and Surface Water Monitoring Report – September 2019 Sampling Event
Eureka Lodge AST Site
Crowley Fuels, LLC
Mile Post 128 Glenn Highway, Alaska

Well ID:	ADEC Cleanup Levels	MW-1		MW-01 Dup		MW-2		MW-3		Equipment Blank		Trip Blank	
Project Sample ID:		**19-ERK-MW-01-01**		**19-ERK-MW-FD-01-01**		**19-ERK-MW-02-01**		**19-ERK-MW-03-01**		**19-ERK-RB-01**		**Trip Blank**	
Lab Sample ID:		1195276001		1195276006		1195276002		1195276003		1195276008		1195276009	
Collection Date/Time:		9/6/2019 1:45 PM		9/6/2019 4:45 PM		9/6/2019 3:40 PM		9/6/2019 4:40 PM		9/6/2019 5:00 PM		9/6/2019 12:00 PM	
PAHs (EPA 8270D SIM LV)													
1-Methylnaphthalene	11	0.0245	U	0.0274	U	0.0262	U	0.0272	U	0.0232	U		
2-Methylnaphthalene	36	0.0245	U	0.0274	U	0.0262	U	0.0272	U	0.0232	U		
Acenaphthene	530	0.0245	U	0.0274	U	0.0262	U	0.0272	U	0.0232	U		
Acenaphthylene	260	0.0245	U	0.0274	U	0.0262	U	0.0272	U	0.0232	U		
Anthracene	43	0.0245	U	0.0274	U	0.0262	U	0.0272	U	0.0232	U		
Benzo(a)Anthracene	0.3	0.0245	U	0.0274	U	0.0262	U	0.0272	U	0.0232	U		
Benzo[a]pyrene	0.25	0.00980	U	0.0110	U	0.0105	U	0.0109	U	0.00925	U		
Benzo[b]Fluoranthene	2.5	0.0245	U	0.0274	U	0.0262	U	0.0272	U	0.0232	U		
Benzo[g,h,i]perylene	0.26	0.0245	U	0.0274	U	0.0262	U	0.0272	U	0.0232	U		
Benzo[k]fluoranthene	0.8	0.0245	U	0.0274	U	0.0262	U	0.0272	U	0.0232	U		
Chrysene	2	0.0245	U	0.0274	U	0.0262	U	0.0272	U	0.0232	U		
Dibenzo[a,h]anthracene	0.25	0.00980	U	0.0110	U	0.0105	U	0.0109	U	0.00925	U		
Fluoranthene	260	0.0245	U	0.0274	U	0.0262	U	0.0272	U	0.0232	U		
Fluorene	290	0.0245	U	0.0274	U	0.0262	U	0.0272	U	0.0232	U		
Indeno[1,2,3-c,d] pyrene	0.19	0.0245	U	0.0274	U	0.0262	U	0.0272	U	0.0232	U		
Naphthalene	1.7	0.0490	U	0.0550	U	0.0525	U	0.0545	U	0.0463	U		
Phenanthrene	170	0.0245	U	0.0274	U	0.0262	U	0.0272	U	0.0232	U		
Pyrene	120	0.0245	U	0.0274	U	0.0262	U	0.0272	U	0.0232	U		

Notes: Results greater than ADEC cleanup values are **underlined & bolded**. ADEC Cleanup Levels from: 18 AAC 75.345, Table C , October 27, 2018.

* SGS unable to detect to ADEC cleanup level for 1,2,3-Trichloropropane.

Key:

-- not applicable
ADEC = Alaska Department of Environmental Conservation
AK = Alaska
DRO = Diesel-range organics
DUP = Duplicate sample at this location
EPA = United States Environmental Protection Agency
ERK = Eureka
FD = Field Duplicate
GRO = Gaslone-range organics
GW = Groundwater
ID = Identification
LV = low volume
MW = Monitoring well
PAHs = Polycyclic aromatic hydrocarbons
RB = Rinsate Blank a.k.a equipment blank
RRO = Residual-range organics
SIM = Selective ion monitoring
SW= Surface water
VOCs = Volatile Organic Compounds

Data Flags

J+ = The result is considered estimated, biased high, due to a QC anomaly; see Attached data quality assessment report.
U = Not detected.
UB = The result is considered a false-positive detection due to an equipment blank detection; see Attached data quality assessment report.

TABLE 5: LABORATORY RESULTS SUMMARY - SURFACE WATER

Groundwater and Surface Water Monitoring Report – September 2019 Sampling Event
Eureka Lodge AST Site
Crowley Fuels, LLC
Mile Post 128 Glenn Highway, Alaska

Location:	ADEC Cleanup Levels	SW-1		SW-1 (Dup)		SW-02		Trip Blank	
Project Sample ID:		19-ERK-SW-01-01		19-ERK-SW-FD-01-01		19-ERK-SW-02-01		Trip Blank	
Lab Sample ID:		1195276004		1195276007		1195276005		1195276009	
Collection Date/Time:		9/6/2019 4:40 PM		9/6/2019 12:00 PM		9/6/2019 5:00 PM		9/6/19 12:00	
Alaska DEC Fuels (AK102; mg/L)									
GRO C6-C10	2.2	0.0500	U	0.0500	U	0.0500	U	0.0500	U
DRO C10-C25	1.5	0.469	J	0.464	J	0.369	J	--	
VOCs (EPA 624; µg/L)									
1,1,1-Trichloroethane	8000	0.500	U	0.500	U	0.500	U	0.500	U
1,1,2,2-Tetrachloroethane	0.76	0.250	U	0.250	U	0.250	U	0.250	U
1,1,2-Trichloroethane	0.41	0.200	U	0.200	U	0.200	U	0.200	U
1,1-Dichloroethane	28	0.500	U	0.500	U	0.500	U	0.500	U
1,1-Dichloroethene	280	0.500	U	0.500	U	0.500	U	0.500	U
1,1-Dichloropropene	--	0.500	U	0.500	U	0.500	U	0.500	U
1,2,3-Trichlorobenzene	7	0.500	U	0.500	U	0.500	U	0.500	U
1,2,3-Trichloropropane	0.0075	0.500	U	0.500	U	0.500	U	0.500	U
1,2,4-Trimethylbenzene	56	0.500	U	0.500	U	0.500	U	0.500	U
1,2-Dibromoethane	0.075	0.0375	U	0.0375	U	0.0375	U	0.0375	U
1,2-Dichlorobenzene	300	0.500	U	0.500	U	0.500	U	0.500	U
1,2-Dichloroethane	1.7	0.250	U	0.250	U	0.250	U	0.250	U
1,2-Dichloropropane	8.2	0.500	U	0.500	U	0.500	U	0.500	U
1,3,5-Trimethylbenzene	60	0.500	U	0.500	U	0.500	U	0.500	U
1,3-Dichlorobenzene	300	0.500	U	0.500	U	0.500	U	0.500	U
1,3-Dichloropropane	--	0.250	U	0.250	U	0.250	U	0.250	U
1,4-Dichlorobenzene	4.8	0.250	U	0.250	U	0.250	U	0.250	U
2-Butanone (MEK)	5600	5.00	U	5.00	U	5.00	U	5.00	U
2-Chlorotoluene	--	0.500	U	0.500	U	0.500	U	0.500	U
2-Hexanone	38	5.00	U	5.00	U	5.00	U	5.00	U
4-Chlorotoluene	--	0.500	U	0.500	U	0.500	U	0.500	U
4-Isopropyltoluene	--	0.500	U	0.500	U	0.500	U	0.500	U
4-Methyl-2-pentanone (MIBK)	6300	5.00	U	5.00	U	5.00	U	5.00	U
Benzene	4.6	0.200	U	0.200	U	0.200	U	0.200	U
Bromobenzene	62	0.500	U	0.500	U	0.500	U	0.500	U
Bromochloromethane	--	0.500	U	0.500	U	0.500	U	0.500	U
Bromodichloromethane	1.3	0.250	U	0.250	U	0.250	U	0.250	U
Bromoform	33	0.500	U	0.500	U	0.500	U	0.500	U
Bromomethane	7.5	2.50	U	2.50	U	2.50	U	2.50	U
Carbon disulfide	810	5.00	U	5.00	U	5.00	U	5.00	U
Carbon tetrachloride	4.6	0.500	U	0.500	U	0.500	U	0.500	U
Chlorobenzene	78	0.250	U	0.250	U	0.250	U	0.250	U
Chloroethane	21000	0.500	U	0.500	U	0.500	U	0.500	U
Chloroform	2.2	0.500	U	0.500	U	0.500	U	0.500	U
Chloromethane	190	0.500	U	0.500	U	0.500	U	0.500	U
Dibromochloromethane	8.7	0.250	U	0.250	U	0.250	U	0.250	U
Dibromomethane	8.3	0.500	U	0.500	U	0.500	U	0.500	U
Dichlorodifluoromethane	200	0.500	U	0.500	U	0.500	U	0.500	U
Ethylbenzene	15	0.500	U	0.500	U	0.500	U	0.500	U
Isopropylbenzene (Cumene)	450	0.500	U	0.500	U	0.500	U	0.500	U
Methyl-t-butyl ether	140	5.00	U	5.00	U	5.00	U	5.00	U
Methylene chloride	110	2.50	U	2.50	U	2.50	U	2.50	U
Naphthalene	1.7	0.500	U	0.500	U	0.500	U	0.500	U
P & M -Xylene	--	1.00	U	1.00	U	1.00	U	1.00	U
Styrene	1200	0.500	U	0.500	U	0.500	U	0.500	U
Tetrachloroethene	41	0.500	U	0.500	U	0.500	U	0.500	U
Toluene	1100	0.500	U	0.500	U	0.500	U	0.500	U
Trichloroethene	2.8	0.500	U	0.500	U	0.500	U	0.500	U
Trichlorofluoromethane	5200	0.500	U	0.500	U	0.500	U	0.500	U
Vinyl acetate	410	5.00	U	5.00	U	5.00	U	5.00	U
Vinyl chloride	0.19	0.0750	U	0.0750	U	0.0750	U	0.0750	U
Xylenes (total)	190	1.50	U	1.50	U	1.50	U	1.50	U
cis-1,2-Dichloroethene	36	0.500	U	0.500	U	0.500	U	0.500	U
cis-1,3-Dichloropropene	4.7	0.250	U	0.250	U	0.250	U	0.250	U
n-Butylbenzene	1000	0.500	U	0.500	U	0.500	U	0.500	U
n-Propylbenzene	660	0.500	U	0.500	U	0.500	U	0.500	U
o-Xylene	--	0.500	U	0.500	U	0.500	U	0.500	U
sec-Butylbenzene	2000	0.500	U	0.500	U	0.500	U	0.500	U
trans-1,2-Dichloroethene	360	0.500	U	0.500	U	0.500	U	0.500	U
trans-1,3-Dichloropropene	4.7	0.500	U	0.500	U	0.500	U	0.500	U

TABLE 5: LABORATORY RESULTS SUMMARY - SURFACE WATER

Groundwater and Surface Water Monitoring Report – September 2019 Sampling Event
Eureka Lodge AST Site
Crowley Fuels, LLC
Mile Post 128 Glenn Highway, Alaska

Location:	ADEC Cleanup Levels	SW-1		SW-1 (Dup)		SW-02		Trip Blank	
Project Sample ID:		19-ERK-SW-01-01		19-ERK-SW-FD-01-01		19-ERK-SW-02-01		Trip Blank	
Lab Sample ID:		1195276004		1195276007		1195276005		1195276009	
Collection Date/Time:		9/6/2019 4:40 PM		9/6/2019 12:00 PM		9/6/2019 5:00 PM		9/6/19 12:00	
PAHs (EPA 625M SIM LV)									
Acenaphthene	530	0.0236	U	0.0236	U	0.0232	U	--	
Acenaphthylene	260	0.0236	U	0.0236	U	0.0232	U	--	
Anthracene	43	0.0236	U	0.0236	U	0.0232	U	--	
Benzo(a)Anthracene	0.3	0.0236	U	0.0236	U	0.0232	U	--	
Benzo[a]pyrene	0.25	0.00945	U	0.00945	U	0.00925	U	--	
Benzo[b]Fluoranthene	2.5	0.0236	U	0.0236	U	0.0232	U	--	
Benzo[g,h,i]perylene	0.26	0.0236	U	0.0236	U	0.0232	U	--	
Benzo[k]fluoranthene	0.8	0.0236	U	0.0236	U	0.0232	U	--	
Chrysene	2	0.0236	U	0.0236	U	0.0232	U	--	
Dibenzo[a,h]anthracene	0.25	0.00945	U	0.00945	U	0.00925	U	--	
Fluoranthene	260	0.0236	U	0.0236	U	0.0232	U	--	
Fluorene	290	0.0236	U	0.0236	U	0.0232	U	--	
Indeno[1,2,3-c,d] pyrene	0.19	0.0236	U	0.0236	U	0.0232	U	--	
Naphthalene	1.7	0.0471	U	0.0471	U	0.0463	U	--	
Phenanthrene	170	0.0236	U	0.0236	U	0.0232	U	--	
Pyrene	120	0.0236	U	0.0236	U	0.0232	U	--	

Notes: Results greater than ADEC cleanup values are **underlined & bolded**. ADEC Cleanup Levels from: 18 AAC 75.345, Table C , October 27, 2018.

Key:

-- not applicable/not assigned
ADEC = Alaska Department of Environmental Conservation
AK = Alaska
DRO = Diesel-range organics
DUP = Duplicate sample at this location
EPA = United States Environmental Protection Agency
GW = Groundwater
ID = Identification
LV = low volume
MW = Monitoring well
NHTF = Newhalen Tank Farm
PAHs = Polycyclic aromatic hydrocarbons
RB = Rinsate Blank
SIM = Selective ion monitorin
VOCs = Volatile Organic Compounds
mg/L = milligrams per liter
ug/L = micrograms per liter
Dup = Duplicate Sample

Data Flags

J = Estimated concentration; analyte was detected between the method detection limit and the practical quantitation limit.
U - Not detected.

TABLE 6: SURFACE WATER ANALYTICAL RESULTS SUMMARY

Groundwater and Surface Water Monitoring Report – September 2019 Sampling Event
Eureka Lodge AST Site
Crowley Fuels, LLC
Mile Post 128 Glenn Highway, Alaska

Location:	SW-1				SW-2	
Sample ID:	19-ERK-SW-01-01		19-ERK-SW-FD-01-01		19-ERK-SW-02-01	
Description:	Lake 1		Duplicate at SW-1		Lake 2	
Date Collected:	9/6/19				9/6/19	
BTEX by EPA 624 (µg/L)						
Benzene	0.2	U	0.2	U	0.2	U
Ethylbenzene	0.5	U	0.5	U	0.5	U
Toluene	0.5	U	0.5	U	0.5	U
Xylenes, Total	1.5	U	1.5	U	1.5	U
TAH Screening Level: **10** µg/L (sum of BTEX)	2.70		2.70		2.70	
PAHs by USEPA 8270D-SIM (mg/L)						
Acenaphthene	0.0236	U	0.0236	U	0.0232	U
Acenaphthylene	0.0236	U	0.0236	U	0.0232	U
Anthracene	0.0236	U	0.0236	U	0.0232	U
Benzo(a)Anthracene	0.0236	U	0.0236	U	0.0232	U
Benzo[a]pyrene	0.00945	U	0.00945	U	0.00925	U
Benzo[b]Fluoranthene	0.0236	U	0.0236	U	0.0232	U
Benzo[g,h,i]perylene	0.0236	U	0.0236	U	0.0232	U
Benzo[k]fluoranthene	0.0236	U	0.0236	U	0.0232	U
Chrysene	0.0236	U	0.0236	U	0.0232	U
Dibenzo[a,h]anthracene	0.00945	U	0.00945	U	0.00925	U
Fluoranthene	0.0236	U	0.0236	U	0.0232	U
Fluorene	0.0236	U	0.0236	U	0.0232	U
Indeno[1,2,3-c,d] pyrene	0.0236	U	0.0236	U	0.0232	U
Naphthalene	0.0471	U	0.0471	U	0.0463	U
Phenanthrene	0.0236	U	0.0236	U	0.0232	U
Pyrene	0.0236	U	0.0236	U	0.0232	U
TAqH Screening Level: **15** µg/L (sum of BTEX+PAHs)	3.07		3.07		3.07	

Notes: Detections are **bold**; results greater than 18 AAC 70 water quality standards **bolded red** All results are in micrograms per liter.

Key:

BTEX = benzene, toluene, ethylbenzene, and xylenes.
FD = Field duplicate
µg/L = Micrograms per liter.
PAHs = Polycyclic aromatic hydrocarbons
TAH = Total aromatic hydrocarbons
TAqH = Total aqueous hydrocarbons
USEPA = United States Environmental Protection Agency

Data Flags

U - Not detected.

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ATTACHMENT 3

Field Forms and Notes

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Groundwater Sampling Worksheet

dna ENVIRONMENTAL

Project Name: **Eureka 2019** | Sample Location (ie. MW1): MW-1
Client: **Crowley Fuels, LLC** | Date: 9/6/19
Sampler: D. Frank | Purge Start Time: 1320
Weather Conditions: Clear 60°F

Sample ID: 19-ERK-MW-01-01 Time: 1345 (primary) dup split ms/msd
Sample ID: 19-ERK-MW-FD-01-01 Time: primary dup split ms/msd
Sample ID: Time: 1200 primary (dup) split ms/msd

Analyses	Number/type of Bottles	Comments/ preservation:	Analyses	Number/type of Bottles	Comments/ preservation:
VOCs	3x40mL VOA	HCl			
GRO	3x40mL VOA	HCl			
DRO	2x250mL amber	HCl			
PAHs	2x250mL amber	HCl			

Well Information / Purge Volume Calculation

Well Casing Diameter (in): 2"
Product Present? (y/n/sheen) NO
Depth to Top of Product (ft BTOC): NA
Depth to Oil/Water Interface (ft BTOC): NA
(BTOC = below top of casing)

Total Well Depth (ft BTOC): 19.01 (depth to bottom)
Depth to Water (ft BTOC): 10.50
Water Column (ft) ~~8.62~~ 8.51
One Purge Volume (gal): 1.38
purge calculation formula on back

Sensory Observations

Color: (Clear), Amber, Tan, Brown, Grey, Milky White, Other:
Odor: (None), Low, Medium, High, Very Strong, H2S, Fuel Like, Chemical ?, Unknown
Turbidity: None, (Low), Medium, High, Very Turbid, Heavy Silts

Instrument Observations

Round	Time	Volume (gal)	Temp °C	pH	Conductivity ( )	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Color	Odor	Water Level (ft BTOC)	Draw-down (ft)
1	1325	1.0	2.31	6.54	215	—	5.00	144	gray	none	11.7	1.2
2	1330	.2	3.39	6.54	216	—	5.71	148	milky	none	11.5	1.0
3	1335	.2	3.42	6.54	216	—	5.70	140	clear	none	11.2	0.7
4	1340	.2	3.44	6.60	220	—	5.70	139	clear	none	11.0	0.5
5	1345	.2	3.44	6.60	229	—	5.60	138	clear	none	10.9	0.4
6												
7												
8												
9												
10												
11												
12												

see back for additional entry lines if needed

Purge Rate (low flow): 150 mL/min Total Volume Purged: ~1.80 Measured Drawdown (ft):

Notes: Drawdown should be less than 0.3 feet while sampling. Minimal drawdown shall be achieved and measured by pumping at a low rate (approximately 0.1 to 0.5 liter/minute) and continually measuring water levels in the well. Note that site's hyrogeology may make it difficult to achieve this specification.

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.): bladder pump
Sample Method (disposable bailer, teflon bailer, submersible pump, etc.): bladder pump w/ dedicated bladder

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.): good condition

Remarks (well recovery, unusual conditions/observations): low recovery

Signed: Date: 9/6/19

Signed/Reviewer: Date:

Instrument Observations (continued)

dna ENVIRONMENTAL

Groundwater Sampling Worksheet

Project Name: **Eureka 2019** Sample Location (ie. MW1): MW-2

Client: **Crowley** Date:

Sampler: D'Frank Purge Start Time: 1605

Weather Conditions: Calm ~60°F

Sample ID: 19-ERK-MW-02-01 Time: 1645 (primary) dup split ms/msd

Sample ID: Time: primary dup split ms/msd

Sample ID: Time: primary dup split ms/msd

Analyses	Number/type of Bottles	Comments/ preservation:	Analyses	Number/type of Bottles	Comments/ preservation:
VOCs	3 2	HCl			
GRO	3 2	HCl			
DRO/RRO	2 1	HCl			
PAHs	2 1	Ice			

Well Information / Purge Volume Calculation

Well Casing Diameter (in): 2"

Product Present? (y/n/sheen): NO

Depth to Top of Product (ft BTOC): NA

Depth to Oil/Water Interface (ft BTOC): NA

(BTOC = below top of casing)

Total Well Depth (ft BTOC): 18.43 (depth to bottom)

Depth to Water (ft BTOC): 10.59

Water Column (ft) 7.84

One Purge Volume (gal): 1.25

purge calculation formula on back

Sensory Observations

Color: Clear, Amber, Tan, Brown, Grey, Milky White, Other:

Odor: None, Low, Medium, High, Very Strong, H2S, Fuel Like, Chemical ?, Unknown

Turbidity: None, Low, Medium, High, Very Turbid, Heavy Silts

Instrument Observations

Round	Time	Volume (gal)	Temp °C	pH	Conductivity (µS)	Turbidity (NTUs) (TT meter Grolen)	DO (mg/L)	ORP (mV)	Color	Odor	Water Level (ft BTOC)	Draw-down (ft)
1	1625	.74	3.72	6.75	352		1.22	151	clear	none	10.62	0.03
2	1630	.2	3.55	6.66	337		6.53	149	clear	none	10.62	0.03
3	1634	.16	3.56	6.62	332		4.99	149	clear	none	10.62	0.03
4	1637	.12	3.49	6.61	330		5.02	149	clear	none	10.62	0.03
5	1644	.28	3.41	6.61	327		5.32	140	clear	none	10.62	0.03
6												
7												
8												
9												
10												
11												
12												

see back for additional entry lines if needed

Purge Rate (low flow): 150 L/min Total Volume Purged: 1.55 Measured Drawdown (ft): 0.03

Notes: Drawdown should be less than 0.3 feet while sampling. Minimal drawdown shall be achieved and measured by pumping at a low rate (approximately 0.1 to 0.5 liter/minute) and continually measuring water levels in the well. Note that site's hyrogeology may make it difficult to achieve this specification.

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.): bladder pump

Sample Method (disposable bailer, teflon bailer, submersible pump, etc.): bladder pump / dedicated bladder

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.):

Remarks (well recovery, unusual conditions/observations): very slow re-charge

Signed: Date: 9/6/19

Signed/Reviewer: Date:

dna ENVIRONMENTAL — Groundwater Sampling Worksheet

Project Name: **Eureka 2019** | Sample Location (ie. MW1): MW-3
Client: **Crowley** | Date: 9/6/19
Sampler: D. Frank | Purge Start Time: 1405 / 1505
Weather Conditions: calm / clear 60°F

Sample ID: 19-ERK-mw-03-01 Time: 1540 (primary) dup split ms/msd
Sample ID: Time: primary dup split ms/msd
Sample ID: Time: primary dup split ms/msd

Analyses	Number/type of Bottles	Comments/ preservation:	Analyses	Number/type of Bottles	Comments/ preservation:
VOCs	7	HCl			
GRO	1	HCl			
DRO/RRO	1	HCl			
PAHs	1	Ice			

Well Information / Purge Volume Calculation

Well Casing Diameter (in): 2"
Product Present? (y/n/sheen) NO
Depth to Top of Product (ft BTOC): —
Depth to Oil/Water Interface (ft BTOC): —
(BTOC = below top of casing)

Total Well Depth (ft BTOC): 19.52 (depth to bottom)
Depth to Water (ft BTOC): 10.31
Water Column (ft) 9.2
One Purge Volume (gal): 1.47
purge calculation formula on back

Sensory Observations

Color: (Clear) Amber, Tan, Brown, Grey, Milky White, Other:
Odor: (None) Low, Medium, High, Very Strong, H2S, Fuel Like, Chemical ?, Unknown
Turbidity: (None) Low, Medium, High, Very Turbid, Heavy Silts

Instrument Observations

Round	Time	Volume (gal)	Temp °C	pH	Conductivity (mS)	FTT unit broken Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Color	Odor	Water Level (ft BTOC)	Draw-down (ft)
1	1511	.24	3.80	6.69	300		10.5	176	cloudy	none	10.70	0.39
2	1516	.20	3.87	6.70	301		9.76	175	cloudy	none	11.03	0.71
3	1521	.20	3.89	6.69	304		9.18	175	clear	NONE	11.35	1.03
4	1528	.28	3.90	6.69	312		9.11	175	clear	NONE	11.80	1.48
5	1533	.20	3.91	6.69	312		9.01	175	clear	none	12.11	1.81
6	1538	.20	3.91	6.69	316		8.82	176	clear	none	12.44	2.13
7												
8												
9												
10												
11												
12												

see back for additional entry lines if needed

Purge Rate (low flow): 150 mL/min Total Volume Purged: 1.41 L 3.1 Measured Drawdown (ft): 2.13

Notes: Drawdown should be less than 0.3 feet while sampling. Minimal drawdown shall be achieved and measured by pumping at a low rate (approximately 0.1 to 0.5 liter/minute) and continually measuring water levels in the well. Note that site's hyrogeology may make it difficult to achieve this specification.

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.): bladder pump
Sample Method (disposable bailer, teflon bailer, submersible pump, etc.): bladder pump w/dedicated bladder

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.): good condition.

Remarks (well recovery, unusual conditions/observations): very poor recovery

Signed: Date: 9/6/19
Signed/Reviewer: Date:

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ATTACHMENT 4

Photograph Log

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Photograph Log

Attachment 4

Photo: **1** Time: **1839** Date: **9/6/2019** Direction: **North**
Subject: **View of AST site from south.**

Photo: **2** Time: **1839** Date: **9/17/2019** Direction: **East**
Subject: **MW-1, east AST.**

Report: September 2019 Eureka Lodge AST Site Groundwater & Surface Water Monitoring

dnaENVIRONMENTAL

Photograph Log

Attachment 4

Photo: **3** Time: **1839** Date: **9/6/2019** Direction: **Northwest**
Subject: **MW-1, west and east ASTs.**

Photo: **4** Time: **1839** Date: **9/6/2019** Direction: **Northwest**
Subject: **MW-1 and MW-2**

Photograph Log

Attachment 4

Photo: **5** Time: **1838** Date: **9/6/2019** Direction: **West**
Subject: **MW-2 and MW-3**

Photo: **6** Time: **1838** Date: **9/6/2019** Direction: **South**
Subject: **MW-2**

Photograph Log

Attachment 4

Photo: **7** Time: **1838** Date: **9/6/2019** Direction: **West**
Subject: **MW-3**

Photo: **8** Time: **1640** Date: **9/6/2019** Direction: **North**
Subject: **View of Unnamed lake from AST area**

Report: September 2019 Eureka Lodge AST Site Groundwater & Surface Water Monitoring

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Photograph Log

Attachment 4

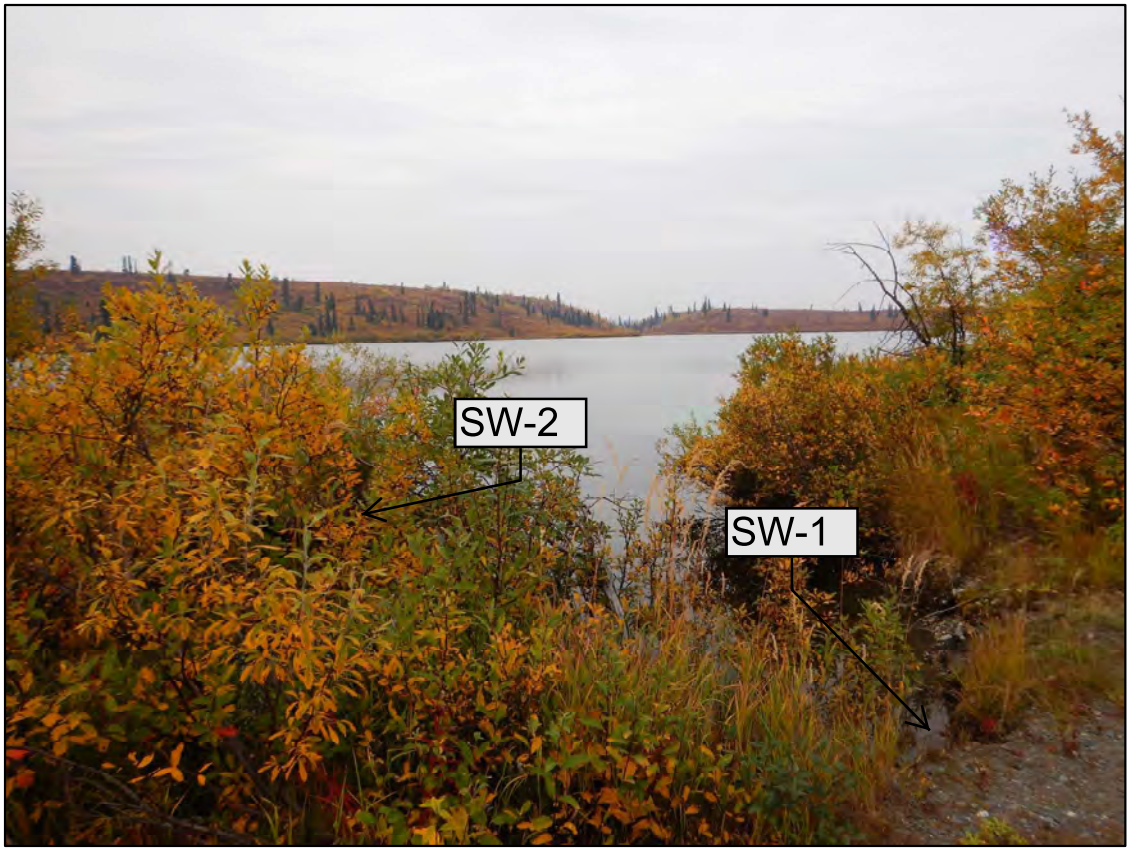

Photo: **9** Time: **1640** Date: **9/6/2019** Direction: **North**
Subject: **SW-1 sample location**

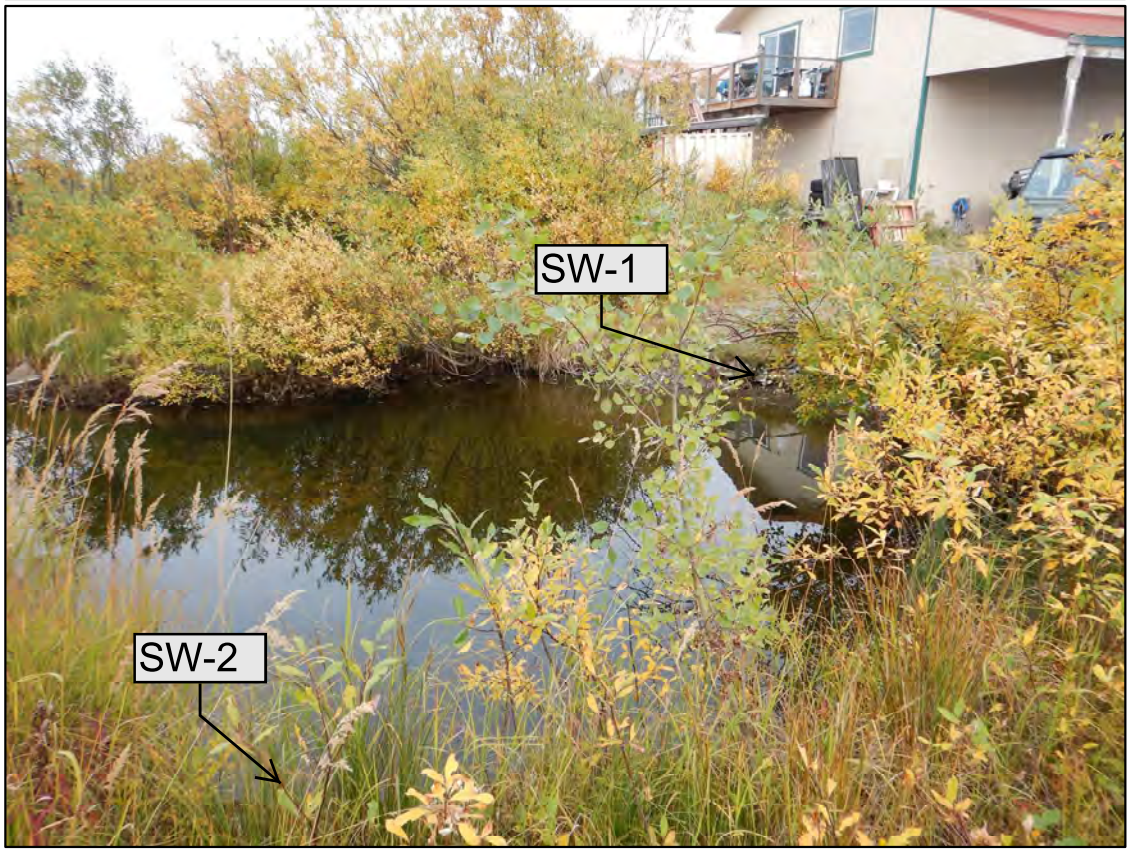

Photo: **10** Time: **1640** Date: **9/6/2019** Direction: **Southeast**
Subject: **SW-2 sample location**

Photograph Log

Attachment 4

Photo: **11** Time: **1737** Date: **9/6/2019** Direction: **South**
Subject: **Site features from North**

ATTACHMENT 5

Laboratory Report

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Laboratory Report of Analysis

To: DNA Environmental Consultants, LLC
111 W. 9th Ave
Anchorage, AK 99501
(907)350-4897

Report Number: **1195276**

Client Project: **Eureka**

Dear Daniel Frank,

Enclosed are the results of the analytical services performed under the referenced project for the received samples and associated QC as applicable. The samples are certified to meet the requirements of the National Environmental Laboratory Accreditation Conference Standards. Copies of this report and supporting data will be retained in our files for a period of ten years in the event they are required for future reference. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. Any samples submitted to our laboratory will be retained for a maximum of fourteen (14) days from the date of this report unless other archiving requirements were included in the quote.

If there are any questions about the report or services performed during this project, please call Justin at (907) 562-2343. We will be happy to answer any questions or concerns which you may have.

Thank you for using SGS North America Inc. for your analytical services. We look forward to working with you again on any additional analytical needs.

Sincerely,
SGS North America Inc.

Justin Nelson Date
Project Manager
Justin.Nelson@sgs.com

SGS North America Inc. 200 West Potter Drive, Anchorage, AK 99518
t 907.562.2343 f 907.561.5301 www.us.sgs.com

Case Narrative

SGS Client: **DNA Environmental Consultants, LLC**
SGS Project: **1195276**
Project Name/Site: **Eureka**
Project Contact: **Daniel Frank**

Refer to sample receipt form for information on sample condition.

LCS for HBN 1799650 [VXX/34911 (1532853) LCS

8260C - LCS recoveries for 1,1-dichloroethene, carbon disulfide, and freon-113 do not meet QC criteria. These analytes were not detected above the LOQ in the associated samples.

LCSD for HBN 1799650 [VXX/3491 (1532854) LCSD

8260C - LCSD recoveries for several analytes do not meet QC criteria. These analytes were not detected above the LOQ in the associated samples.
8260C - LCS/LCSD RPDs for several analytes do not meet QC criteria. These analytes were not detected above the LOQ in the associated samples.

1195266001MSD (1531095) MSD

8270D SIM - PAH MS/MSD RPD for several analytes do not meet QC criteria. Results for this analyte are considered estimated in the parent sample.

*QC comments may be associated with the field samples found in this report. When applicable, comments will be applied to associated field samples.

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Laboratory Qualifiers

Enclosed are the analytical results associated with the above work order. The results apply to the samples as received. All results are intended to be used in their entirety and SGS is not responsible for use of less than the complete report. This document is issued by the Company under its General Conditions of Service accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx>. Attention is drawn to the limitation of liability, indenmification and jurisdiction issues defined therein.

Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. Any unauthorized alteration, forgery or falsification of the context or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

SGS maintains a formal Quality Assurance/Quality Control (QA/QC) program. A copy of our Quality Assurance Plan (QAP), which outlines this program, is available at your request. The laboratory certification numbers are AK00971 (DW Chemistry & Microbiology) & 17-021 (CS) for ADEC and 2944.01 for DOD ELAP/ISO17025 (RCRA methods: 1020B, 1311, 3010A, 3050B, 3520C, 3550C, 5030B, 5035A, 6020A, 7470A, 7471B, 8015C, 8021B, 8082A, 8260C, 8270D, 8270D-SIM, 9040C, 9045D, 9056A, 9060A, AK101 and AK102/103). SGS is only certified for the analytes listed on our Drinking Water Certification (DW methods: 200.8, 2130B, 2320B, 2510B, 300.0, 4500-CN-C,E, 4500-H-B, 4500-NO3-F, 4500-P-E and 524.2) and only those analytes will be reported to the State of Alaska for compliance. Except as specifically noted, all statements and data in this report are in conformance to the provisions set forth by the SGS QAP and, when applicable, other regulatory authorities.

The following descriptors or qualifiers may be found in your report:

*	The analyte has exceeded allowable regulatory or control limits.
!	Surrogate out of control limits.
B	Indicates the analyte is found in a blank associated with the sample.
CCV/CVA/CVB	Continuing Calibration Verification
CCCV/CVC/CVCA/CVCB	Closing Continuing Calibration Verification
CL	Control Limit
DF	Analytical Dilution Factor
DL	Detection Limit (i.e., maximum method detection limit)
E	The analyte result is above the calibrated range.
GT	Greater Than
IB	Instrument Blank
ICV	Initial Calibration Verification
J	The quantitation is an estimation.
LCS(D)	Laboratory Control Spike (Duplicate)
LLQC/LLIQC	Low Level Quantitation Check
LOD	Limit of Detection (i.e., 1/2 of the LOQ)
LOQ	Limit of Quantitation (i.e., reporting or practical quantitation limit)
LT	Less Than
MB	Method Blank
MS(D)	Matrix Spike (Duplicate)
ND	Indicates the analyte is not detected.
RPD	Relative Percent Difference
U	Indicates the analyte was analyzed for but not detected.

Note: Sample summaries which include a result for "Total Solids" have already been adjusted for moisture content. All DRO/RRO analyses are integrated per SOP.

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Sample Summary

Client Sample ID	Lab Sample ID	Collected	Received	Matrix
19-ERK-MW-01-01	1195276001	09/06/2019	09/09/2019	Water (Surface, Eff., Ground)
19-ERK-MW-02-01	1195276002	09/06/2019	09/09/2019	Water (Surface, Eff., Ground)
19-ERK-MW-03-01	1195276003	09/06/2019	09/09/2019	Water (Surface, Eff., Ground)
19-ERK-SW-01-01	1195276004	09/06/2019	09/09/2019	Water (Surface, Eff., Ground)
19-ERK-SW-02-01	1195276005	09/06/2019	09/09/2019	Water (Surface, Eff., Ground)
19-ERK-MW-FD-01-01	1195276006	09/06/2019	09/09/2019	Water (Surface, Eff., Ground)
19-ERK-SW-FD-01-01	1195276007	09/06/2019	09/09/2019	Water (Surface, Eff., Ground)
19-ERK-RB-01	1195276008	09/06/2019	09/09/2019	Water (Surface, Eff., Ground)
Trip Blank	1195276009	09/06/2019	09/09/2019	Water (Surface, Eff., Ground)

Method	Method Description
EPA 625M SIM (PAH) LV	625 PAH SIM GC/MS Low Volume
8270D SIM LV (PAH)	8270 PAH SIM GC/MS Liq/Liq ext. LV
AK102	DRO/RRO Low Volume Water
AK101	Gasoline Range Organics (W)
SW8260C	Volatile Organic Compounds (W) FULL
EPA 624	Volatile Organic Compounds by GC/MS (W)

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Detectable Results Summary

Client Sample ID: **19-ERK-MW-01-01**
Lab Sample ID: 1195276001

	Parameter	Result	Units
Semivolatile Organic Fuels	Diesel Range Organics	4.77	mg/L
Volatile GC/MS	Tetrachloroethene	0.660J	ug/L

Client Sample ID: **19-ERK-MW-02-01**
Lab Sample ID: 1195276002

	Parameter	Result	Units
Semivolatile Organic Fuels	Diesel Range Organics	0.623J	mg/L

Client Sample ID: **19-ERK-MW-03-01**
Lab Sample ID: 1195276003

	Parameter	Result	Units
Semivolatile Organic Fuels	Diesel Range Organics	0.488J	mg/L

Client Sample ID: **19-ERK-SW-01-01**
Lab Sample ID: 1195276004

	Parameter	Result	Units
Semivolatile Organic Fuels	Diesel Range Organics	0.469J	mg/L

Client Sample ID: **19-ERK-SW-02-01**
Lab Sample ID: 1195276005

	Parameter	Result	Units
Semivolatile Organic Fuels	Diesel Range Organics	0.369J	mg/L

Client Sample ID: **19-ERK-MW-FD-01-01**
Lab Sample ID: 1195276006

	Parameter	Result	Units
Semivolatile Organic Fuels	Diesel Range Organics	5.28	mg/L
Volatile GC/MS	Tetrachloroethene	0.570J	ug/L

Client Sample ID: **19-ERK-SW-FD-01-01**
Lab Sample ID: 1195276007

	Parameter	Result	Units
Semivolatile Organic Fuels	Diesel Range Organics	0.464J	mg/L

Client Sample ID: **19-ERK-RB-01**
Lab Sample ID: 1195276008

	Parameter	Result	Units
Semivolatile Organic Fuels	Diesel Range Organics	0.230J	mg/L
Volatile GC/MS	Toluene	1.01	ug/L

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Results of **19-ERK-MW-01-01**

Client Sample ID: **19-ERK-MW-01-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276001
Lab Project ID: 1195276

Collection Date: 09/06/19 13:45
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	0.0245	U	0.0490	0.0147	ug/L	1		09/18/19 13:21
2-Methylnaphthalene	0.0245	U	0.0490	0.0147	ug/L	1		09/18/19 13:21
Acenaphthene	0.0245	U	0.0490	0.0147	ug/L	1		09/18/19 13:21
Acenaphthylene	0.0245	U	0.0490	0.0147	ug/L	1		09/18/19 13:21
Anthracene	0.0245	U	0.0490	0.0147	ug/L	1		09/18/19 13:21
Benzo(a)Anthracene	0.0245	U	0.0490	0.0147	ug/L	1		09/18/19 13:21
Benzo[a]pyrene	0.00980	U	0.0196	0.00608	ug/L	1		09/18/19 13:21
Benzo[b]Fluoranthene	0.0245	U	0.0490	0.0147	ug/L	1		09/18/19 13:21
Benzo[g,h,i]perylene	0.0245	U	0.0490	0.0147	ug/L	1		09/18/19 13:21
Benzo[k]fluoranthene	0.0245	U	0.0490	0.0147	ug/L	1		09/18/19 13:21
Chrysene	0.0245	U	0.0490	0.0147	ug/L	1		09/18/19 13:21
Dibenzo[a,h]anthracene	0.00980	U	0.0196	0.00608	ug/L	1		09/18/19 13:21
Fluoranthene	0.0245	U	0.0490	0.0147	ug/L	1		09/18/19 13:21
Fluorene	0.0245	U	0.0490	0.0147	ug/L	1		09/18/19 13:21
Indeno[1,2,3-c,d] pyrene	0.0245	U	0.0490	0.0147	ug/L	1		09/18/19 13:21
Naphthalene	0.0490	U	0.0980	0.0304	ug/L	1		09/18/19 13:21
Phenanthrene	0.0245	U	0.0490	0.0147	ug/L	1		09/18/19 13:21
Pyrene	0.0245	U	0.0490	0.0147	ug/L	1		09/18/19 13:21
Surrogates								
2-Methylnaphthalene-d10 (surr)	68.5		47-106		%	1		09/18/19 13:21
Fluoranthene-d10 (surr)	64.7		24-116		%	1		09/18/19 13:21

Batch Information

Analytical Batch: XMS11722
Analytical Method: 8270D SIM LV (PAH)
Analyst: DSD
Analytical Date/Time: 09/18/19 13:21
Container ID: 1195276001-F

Prep Batch: XXX42235
Prep Method: SW3520C
Prep Date/Time: 09/11/19 09:16
Prep Initial Wt./Vol.: 255 mL
Prep Extract Vol: 1 mL

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-MW-01-01**

Client Sample ID: **19-ERK-MW-01-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276001
Lab Project ID: 1195276

Collection Date: 09/06/19 13:45
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	4.77		0.636	0.191	mg/L	1		09/30/19 14:26
Surrogates								
5a Androstane (surr)	89.3		50-150		%	1		09/30/19 14:26

Batch Information

Analytical Batch: XFC15355
Analytical Method: AK102
Analyst: CMS
Analytical Date/Time: 09/30/19 14:26
Container ID: 1195276001-D

Prep Batch: XXX42280
Prep Method: SW3520C
Prep Date/Time: 09/17/19 08:38
Prep Initial Wt./Vol.: 236 mL
Prep Extract Vol: 1 mL

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-MW-01-01**

Client Sample ID: **19-ERK-MW-01-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276001
Lab Project ID: 1195276

Collection Date: 09/06/19 13:45
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		09/15/19 04:21
Surrogates								
4-Bromofluorobenzene (surr)	80.1		50-150		%	1		09/15/19 04:21

Batch Information

Analytical Batch: VFC14930
Analytical Method: AK101
Analyst: NRB
Analytical Date/Time: 09/15/19 04:21
Container ID: 1195276001-A

Prep Batch: VXX34873
Prep Method: SW5030B
Prep Date/Time: 09/14/19 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-MW-01-01**

Client Sample ID: **19-ERK-MW-01-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276001
Lab Project ID: 1195276

Collection Date: 09/06/19 13:45
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		09/17/19 18:55
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 18:55
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		09/17/19 18:55
1,1,2-Trichloroethane	0.200	U	0.400	0.120	ug/L	1		09/17/19 18:55
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 18:55
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		09/17/19 18:55
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		09/17/19 18:55
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 18:55
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		09/17/19 18:55
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 18:55
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 18:55
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		09/17/19 18:55
1,2-Dibromoethane	0.0375	U	0.0750	0.0180	ug/L	1		09/17/19 18:55
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 18:55
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		09/17/19 18:55
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		09/17/19 18:55
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 18:55
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 18:55
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		09/17/19 18:55
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		09/17/19 18:55
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		09/17/19 18:55
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		09/17/19 18:55
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		09/17/19 18:55
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		09/17/19 18:55
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		09/17/19 18:55
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		09/17/19 18:55
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		09/17/19 18:55
Benzene	0.200	U	0.400	0.120	ug/L	1		09/17/19 18:55
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 18:55
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 18:55
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		09/17/19 18:55
Bromoform	0.500	U	1.00	0.310	ug/L	1		09/17/19 18:55
Bromomethane	2.50	U	5.00	1.50	ug/L	1		09/17/19 18:55
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		09/17/19 18:55
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		09/17/19 18:55
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		09/17/19 18:55

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J flagging is activated

Results of **19-ERK-MW-01-01**

Client Sample ID: **19-ERK-MW-01-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276001
Lab Project ID: 1195276

Collection Date: 09/06/19 13:45
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 18:55
Chloroform	0.500 U		1.00	0.310	ug/L	1		09/17/19 18:55
Chloromethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 18:55
cis-1,2-Dichloroethene	0.500 U		1.00	0.310	ug/L	1		09/17/19 18:55
cis-1,3-Dichloropropene	0.250 U		0.500	0.150	ug/L	1		09/17/19 18:55
Dibromochloromethane	0.250 U		0.500	0.150	ug/L	1		09/17/19 18:55
Dibromomethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 18:55
Dichlorodifluoromethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 18:55
Ethylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 18:55
Freon-113	5.00 U		10.0	3.10	ug/L	1		09/17/19 18:55
Hexachlorobutadiene	0.500 U		1.00	0.310	ug/L	1		09/17/19 18:55
Isopropylbenzene (Cumene)	0.500 U		1.00	0.310	ug/L	1		09/17/19 18:55
Methylene chloride	2.50 U		5.00	1.00	ug/L	1		09/17/19 18:55
Methyl-t-butyl ether	5.00 U		10.0	3.10	ug/L	1		09/17/19 18:55
Naphthalene	0.500 U		1.00	0.310	ug/L	1		09/17/19 18:55
n-Butylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 18:55
n-Propylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 18:55
o-Xylene	0.500 U		1.00	0.310	ug/L	1		09/17/19 18:55
P & M -Xylene	1.00 U		2.00	0.620	ug/L	1		09/17/19 18:55
sec-Butylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 18:55
Styrene	0.500 U		1.00	0.310	ug/L	1		09/17/19 18:55
tert-Butylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 18:55
Tetrachloroethene	0.660 J		1.00	0.310	ug/L	1		09/17/19 18:55
Toluene	0.500 U		1.00	0.310	ug/L	1		09/17/19 18:55
trans-1,2-Dichloroethene	0.500 U		1.00	0.310	ug/L	1		09/17/19 18:55
trans-1,3-Dichloropropene	0.500 U		1.00	0.310	ug/L	1		09/17/19 18:55
Trichloroethene	0.500 U		1.00	0.310	ug/L	1		09/17/19 18:55
Trichlorofluoromethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 18:55
Vinyl acetate	5.00 U		10.0	3.10	ug/L	1		09/17/19 18:55
Vinyl chloride	0.0750 U		0.150	0.0500	ug/L	1		09/17/19 18:55
Xylenes (total)	1.50 U		3.00	1.00	ug/L	1		09/17/19 18:55
Surrogates								
1,2-Dichloroethane-D4 (surr)	108		81-118		%	1		09/17/19 18:55
4-Bromofluorobenzene (surr)	98.7		85-114		%	1		09/17/19 18:55
Toluene-d8 (surr)	99.9		89-112		%	1		09/17/19 18:55

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J flagging is activated

Results of **19-ERK-MW-01-01**

Client Sample ID: **19-ERK-MW-01-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276001
Lab Project ID: 1195276

Collection Date: 09/06/19 13:45
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS19458
Analytical Method: SW8260C
Analyst: CMC
Analytical Date/Time: 09/17/19 18:55
Container ID: 1195276001-B

Prep Batch: VXX34911
Prep Method: SW5030B
Prep Date/Time: 09/17/19 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-MW-02-01**

Client Sample ID: **19-ERK-MW-02-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276002
Lab Project ID: 1195276

Collection Date: 09/06/19 16:45
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	0.0262	U	0.0525	0.0158	ug/L	1		09/18/19 13:42
2-Methylnaphthalene	0.0262	U	0.0525	0.0158	ug/L	1		09/18/19 13:42
Acenaphthene	0.0262	U	0.0525	0.0158	ug/L	1		09/18/19 13:42
Acenaphthylene	0.0262	U	0.0525	0.0158	ug/L	1		09/18/19 13:42
Anthracene	0.0262	U	0.0525	0.0158	ug/L	1		09/18/19 13:42
Benzo(a)Anthracene	0.0262	U	0.0525	0.0158	ug/L	1		09/18/19 13:42
Benzo[a]pyrene	0.0105	U	0.0210	0.00651	ug/L	1		09/18/19 13:42
Benzo[b]Fluoranthene	0.0262	U	0.0525	0.0158	ug/L	1		09/18/19 13:42
Benzo[g,h,i]perylene	0.0262	U	0.0525	0.0158	ug/L	1		09/18/19 13:42
Benzo[k]fluoranthene	0.0262	U	0.0525	0.0158	ug/L	1		09/18/19 13:42
Chrysene	0.0262	U	0.0525	0.0158	ug/L	1		09/18/19 13:42
Dibenzo[a,h]anthracene	0.0105	U	0.0210	0.00651	ug/L	1		09/18/19 13:42
Fluoranthene	0.0262	U	0.0525	0.0158	ug/L	1		09/18/19 13:42
Fluorene	0.0262	U	0.0525	0.0158	ug/L	1		09/18/19 13:42
Indeno[1,2,3-c,d] pyrene	0.0262	U	0.0525	0.0158	ug/L	1		09/18/19 13:42
Naphthalene	0.0525	U	0.105	0.0326	ug/L	1		09/18/19 13:42
Phenanthrene	0.0262	U	0.0525	0.0158	ug/L	1		09/18/19 13:42
Pyrene	0.0262	U	0.0525	0.0158	ug/L	1		09/18/19 13:42
Surrogates								
2-Methylnaphthalene-d10 (surr)	62.8		47-106		%	1		09/18/19 13:42
Fluoranthene-d10 (surr)	64.9		24-116		%	1		09/18/19 13:42

Batch Information

Analytical Batch: XMS11722
Analytical Method: 8270D SIM LV (PAH)
Analyst: DSD
Analytical Date/Time: 09/18/19 13:42
Container ID: 1195276002-F

Prep Batch: XXX42235
Prep Method: SW3520C
Prep Date/Time: 09/11/19 09:16
Prep Initial Wt./Vol.: 238 mL
Prep Extract Vol: 1 mL

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-MW-02-01**

Client Sample ID: **19-ERK-MW-02-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276002
Lab Project ID: 1195276

Collection Date: 09/06/19 16:45
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.623	J	0.670	0.201	mg/L	1		09/30/19 14:36
Surrogates								
5a Androstane (surr)	87.6		50-150		%	1		09/30/19 14:36

Batch Information

Analytical Batch: XFC15355
Analytical Method: AK102
Analyst: CMS
Analytical Date/Time: 09/30/19 14:36
Container ID: 1195276002-D

Prep Batch: XXX42280
Prep Method: SW3520C
Prep Date/Time: 09/17/19 08:38
Prep Initial Wt./Vol.: 224 mL
Prep Extract Vol: 1 mL

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-MW-02-01**

Client Sample ID: **19-ERK-MW-02-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276002
Lab Project ID: 1195276

Collection Date: 09/06/19 16:45
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		09/15/19 04:38
Surrogates								
4-Bromofluorobenzene (surr)	84.9		50-150		%	1		09/15/19 04:38

Batch Information

Analytical Batch: VFC14930
Analytical Method: AK101
Analyst: NRB
Analytical Date/Time: 09/15/19 04:38
Container ID: 1195276002-A

Prep Batch: VXX34873
Prep Method: SW5030B
Prep Date/Time: 09/14/19 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-MW-02-01**

Client Sample ID: **19-ERK-MW-02-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276002
Lab Project ID: 1195276

Collection Date: 09/06/19 16:45
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		09/17/19 19:10
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:10
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		09/17/19 19:10
1,1,2-Trichloroethane	0.200	U	0.400	0.120	ug/L	1		09/17/19 19:10
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:10
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:10
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:10
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:10
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:10
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:10
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:10
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		09/17/19 19:10
1,2-Dibromoethane	0.0375	U	0.0750	0.0180	ug/L	1		09/17/19 19:10
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:10
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		09/17/19 19:10
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:10
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:10
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:10
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		09/17/19 19:10
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		09/17/19 19:10
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:10
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		09/17/19 19:10
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:10
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		09/17/19 19:10
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:10
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:10
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		09/17/19 19:10
Benzene	0.200	U	0.400	0.120	ug/L	1		09/17/19 19:10
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:10
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:10
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		09/17/19 19:10
Bromoform	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:10
Bromomethane	2.50	U	5.00	1.50	ug/L	1		09/17/19 19:10
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		09/17/19 19:10
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:10
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		09/17/19 19:10

Results of **19-ERK-MW-02-01**

Client Sample ID: **19-ERK-MW-02-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276002
Lab Project ID: 1195276

Collection Date: 09/06/19 16:45
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:10
Chloroform	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:10
Chloromethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:10
cis-1,2-Dichloroethene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:10
cis-1,3-Dichloropropene	0.250 U		0.500	0.150	ug/L	1		09/17/19 19:10
Dibromochloromethane	0.250 U		0.500	0.150	ug/L	1		09/17/19 19:10
Dibromomethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:10
Dichlorodifluoromethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:10
Ethylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:10
Freon-113	5.00 U		10.0	3.10	ug/L	1		09/17/19 19:10
Hexachlorobutadiene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:10
Isopropylbenzene (Cumene)	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:10
Methylene chloride	2.50 U		5.00	1.00	ug/L	1		09/17/19 19:10
Methyl-t-butyl ether	5.00 U		10.0	3.10	ug/L	1		09/17/19 19:10
Naphthalene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:10
n-Butylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:10
n-Propylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:10
o-Xylene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:10
P & M -Xylene	1.00 U		2.00	0.620	ug/L	1		09/17/19 19:10
sec-Butylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:10
Styrene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:10
tert-Butylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:10
Tetrachloroethene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:10
Toluene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:10
trans-1,2-Dichloroethene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:10
trans-1,3-Dichloropropene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:10
Trichloroethene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:10
Trichlorofluoromethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:10
Vinyl acetate	5.00 U		10.0	3.10	ug/L	1		09/17/19 19:10
Vinyl chloride	0.0750 U		0.150	0.0500	ug/L	1		09/17/19 19:10
Xylenes (total)	1.50 U		3.00	1.00	ug/L	1		09/17/19 19:10
Surrogates								
1,2-Dichloroethane-D4 (surr)	110		81-118		%	1		09/17/19 19:10
4-Bromofluorobenzene (surr)	98.6		85-114		%	1		09/17/19 19:10
Toluene-d8 (surr)	98		89-112		%	1		09/17/19 19:10

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-MW-02-01**

Client Sample ID: **19-ERK-MW-02-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276002
Lab Project ID: 1195276

Collection Date: 09/06/19 16:45
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS19458
Analytical Method: SW8260C
Analyst: CMC
Analytical Date/Time: 09/17/19 19:10
Container ID: 1195276002-B

Prep Batch: VXX34911
Prep Method: SW5030B
Prep Date/Time: 09/17/19 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Results of **19-ERK-MW-03-01**

Client Sample ID: **19-ERK-MW-03-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276003
Lab Project ID: 1195276

Collection Date: 09/06/19 15:40
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	0.0272	U	0.0543	0.0163	ug/L	1		09/18/19 14:02
2-Methylnaphthalene	0.0272	U	0.0543	0.0163	ug/L	1		09/18/19 14:02
Acenaphthene	0.0272	U	0.0543	0.0163	ug/L	1		09/18/19 14:02
Acenaphthylene	0.0272	U	0.0543	0.0163	ug/L	1		09/18/19 14:02
Anthracene	0.0272	U	0.0543	0.0163	ug/L	1		09/18/19 14:02
Benzo(a)Anthracene	0.0272	U	0.0543	0.0163	ug/L	1		09/18/19 14:02
Benzo[a]pyrene	0.0109	U	0.0217	0.00674	ug/L	1		09/18/19 14:02
Benzo[b]Fluoranthene	0.0272	U	0.0543	0.0163	ug/L	1		09/18/19 14:02
Benzo[g,h,i]perylene	0.0272	U	0.0543	0.0163	ug/L	1		09/18/19 14:02
Benzo[k]fluoranthene	0.0272	U	0.0543	0.0163	ug/L	1		09/18/19 14:02
Chrysene	0.0272	U	0.0543	0.0163	ug/L	1		09/18/19 14:02
Dibenzo[a,h]anthracene	0.0109	U	0.0217	0.00674	ug/L	1		09/18/19 14:02
Fluoranthene	0.0272	U	0.0543	0.0163	ug/L	1		09/18/19 14:02
Fluorene	0.0272	U	0.0543	0.0163	ug/L	1		09/18/19 14:02
Indeno[1,2,3-c,d] pyrene	0.0272	U	0.0543	0.0163	ug/L	1		09/18/19 14:02
Naphthalene	0.0545	U	0.109	0.0337	ug/L	1		09/18/19 14:02
Phenanthrene	0.0272	U	0.0543	0.0163	ug/L	1		09/18/19 14:02
Pyrene	0.0272	U	0.0543	0.0163	ug/L	1		09/18/19 14:02
Surrogates								
2-Methylnaphthalene-d10 (surr)	63.6		47-106		%	1		09/18/19 14:02
Fluoranthene-d10 (surr)	64.7		24-116		%	1		09/18/19 14:02

Batch Information

Analytical Batch: XMS11722
Analytical Method: 8270D SIM LV (PAH)
Analyst: DSD
Analytical Date/Time: 09/18/19 14:02
Container ID: 1195276003-F

Prep Batch: XXX42235
Prep Method: SW3520C
Prep Date/Time: 09/11/19 09:16
Prep Initial Wt./Vol.: 230 mL
Prep Extract Vol: 1 mL

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-MW-03-01**

Client Sample ID: **19-ERK-MW-03-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276003
Lab Project ID: 1195276

Collection Date: 09/06/19 15:40
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.488	J	0.615	0.184	mg/L	1		09/30/19 14:46
Surrogates								
5a Androstane (surr)	93		50-150		%	1		09/30/19 14:46

Batch Information

Analytical Batch: XFC15355
Analytical Method: AK102
Analyst: CMS
Analytical Date/Time: 09/30/19 14:46
Container ID: 1195276003-D

Prep Batch: XXX42280
Prep Method: SW3520C
Prep Date/Time: 09/17/19 08:38
Prep Initial Wt./Vol.: 244 mL
Prep Extract Vol: 1 mL

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-MW-03-01**

Client Sample ID: **19-ERK-MW-03-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276003
Lab Project ID: 1195276

Collection Date: 09/06/19 15:40
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		09/15/19 04:56
Surrogates								
4-Bromofluorobenzene (surr)	82.3		50-150		%	1		09/15/19 04:56

Batch Information

Analytical Batch: VFC14930
Analytical Method: AK101
Analyst: NRB
Analytical Date/Time: 09/15/19 04:56
Container ID: 1195276003-A

Prep Batch: VXX34873
Prep Method: SW5030B
Prep Date/Time: 09/14/19 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-MW-03-01**

Client Sample ID: **19-ERK-MW-03-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276003
Lab Project ID: 1195276

Collection Date: 09/06/19 15:40
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		09/17/19 19:25
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:25
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		09/17/19 19:25
1,1,2-Trichloroethane	0.200	U	0.400	0.120	ug/L	1		09/17/19 19:25
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:25
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:25
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:25
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:25
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:25
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:25
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:25
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		09/17/19 19:25
1,2-Dibromoethane	0.0375	U	0.0750	0.0180	ug/L	1		09/17/19 19:25
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:25
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		09/17/19 19:25
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:25
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:25
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:25
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		09/17/19 19:25
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		09/17/19 19:25
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:25
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		09/17/19 19:25
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:25
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		09/17/19 19:25
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:25
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:25
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		09/17/19 19:25
Benzene	0.200	U	0.400	0.120	ug/L	1		09/17/19 19:25
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:25
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:25
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		09/17/19 19:25
Bromoform	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:25
Bromomethane	2.50	U	5.00	1.50	ug/L	1		09/17/19 19:25
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		09/17/19 19:25
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:25
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		09/17/19 19:25

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J flagging is activated

Results of **19-ERK-MW-03-01**

Client Sample ID: **19-ERK-MW-03-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276003
Lab Project ID: 1195276

Collection Date: 09/06/19 15:40
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:25
Chloroform	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:25
Chloromethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:25
cis-1,2-Dichloroethene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:25
cis-1,3-Dichloropropene	0.250 U		0.500	0.150	ug/L	1		09/17/19 19:25
Dibromochloromethane	0.250 U		0.500	0.150	ug/L	1		09/17/19 19:25
Dibromomethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:25
Dichlorodifluoromethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:25
Ethylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:25
Freon-113	5.00 U		10.0	3.10	ug/L	1		09/17/19 19:25
Hexachlorobutadiene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:25
Isopropylbenzene (Cumene)	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:25
Methylene chloride	2.50 U		5.00	1.00	ug/L	1		09/17/19 19:25
Methyl-t-butyl ether	5.00 U		10.0	3.10	ug/L	1		09/17/19 19:25
Naphthalene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:25
n-Butylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:25
n-Propylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:25
o-Xylene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:25
P & M -Xylene	1.00 U		2.00	0.620	ug/L	1		09/17/19 19:25
sec-Butylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:25
Styrene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:25
tert-Butylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:25
Tetrachloroethene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:25
Toluene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:25
trans-1,2-Dichloroethene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:25
trans-1,3-Dichloropropene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:25
Trichloroethene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:25
Trichlorofluoromethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:25
Vinyl acetate	5.00 U		10.0	3.10	ug/L	1		09/17/19 19:25
Vinyl chloride	0.0750 U		0.150	0.0500	ug/L	1		09/17/19 19:25
Xylenes (total)	1.50 U		3.00	1.00	ug/L	1		09/17/19 19:25
Surrogates								
1,2-Dichloroethane-D4 (surr)	110		81-118		%	1		09/17/19 19:25
4-Bromofluorobenzene (surr)	96.6		85-114		%	1		09/17/19 19:25
Toluene-d8 (surr)	98		89-112		%	1		09/17/19 19:25

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-MW-03-01**

Client Sample ID: **19-ERK-MW-03-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276003
Lab Project ID: 1195276

Collection Date: 09/06/19 15:40
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS19458
Analytical Method: SW8260C
Analyst: CMC
Analytical Date/Time: 09/17/19 19:25
Container ID: 1195276003-B

Prep Batch: VXX34911
Prep Method: SW5030B
Prep Date/Time: 09/17/19 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-SW-01-01**

Client Sample ID: **19-ERK-SW-01-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276004
Lab Project ID: 1195276

Collection Date: 09/06/19 16:40
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Acenaphthene	0.0236	U	0.0472	0.0142	ug/L	1		09/18/19 14:23
Acenaphthylene	0.0236	U	0.0472	0.0142	ug/L	1		09/18/19 14:23
Anthracene	0.0236	U	0.0472	0.0142	ug/L	1		09/18/19 14:23
Benzo(a)Anthracene	0.0236	U	0.0472	0.0142	ug/L	1		09/18/19 14:23
Benzo[a]pyrene	0.00945	U	0.0189	0.00585	ug/L	1		09/18/19 14:23
Benzo[b]Fluoranthene	0.0236	U	0.0472	0.0142	ug/L	1		09/18/19 14:23
Benzo[g,h,i]perylene	0.0236	U	0.0472	0.0142	ug/L	1		09/18/19 14:23
Benzo[k]fluoranthene	0.0236	U	0.0472	0.0142	ug/L	1		09/18/19 14:23
Chrysene	0.0236	U	0.0472	0.0142	ug/L	1		09/18/19 14:23
Dibenzo[a,h]anthracene	0.00945	U	0.0189	0.00585	ug/L	1		09/18/19 14:23
Fluoranthene	0.0236	U	0.0472	0.0142	ug/L	1		09/18/19 14:23
Fluorene	0.0236	U	0.0472	0.0142	ug/L	1		09/18/19 14:23
Indeno[1,2,3-c,d] pyrene	0.0236	U	0.0472	0.0142	ug/L	1		09/18/19 14:23
Naphthalene	0.0471	U	0.0943	0.0292	ug/L	1		09/18/19 14:23
Phenanthrene	0.0236	U	0.0472	0.0142	ug/L	1		09/18/19 14:23
Pyrene	0.0236	U	0.0472	0.0142	ug/L	1		09/18/19 14:23
Surrogates								
2-Methylnaphthalene-d10 (surr)	69.9		47-106		%	1		09/18/19 14:23
Fluoranthene-d10 (surr)	72.5		24-116		%	1		09/18/19 14:23

Batch Information

Analytical Batch: XMS11722
Analytical Method: EPA 625M SIM (PAH) LV
Analyst: DSD
Analytical Date/Time: 09/18/19 14:23
Container ID: 1195276004-I

Prep Batch: XXX42235
Prep Method: SW3520C
Prep Date/Time: 09/11/19 09:16
Prep Initial Wt./Vol.: 265 mL
Prep Extract Vol: 1 mL

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-SW-01-01**

Client Sample ID: **19-ERK-SW-01-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276004
Lab Project ID: 1195276

Collection Date: 09/06/19 16:40
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.469	J	0.577	0.173	mg/L	1		09/30/19 14:56
Surrogates								
5a Androstane (surr)	88.7		50-150		%	1		09/30/19 14:56

Batch Information

Analytical Batch: XFC15355
Analytical Method: AK102
Analyst: CMS
Analytical Date/Time: 09/30/19 14:56
Container ID: 1195276004-G

Prep Batch: XXX42280
Prep Method: SW3520C
Prep Date/Time: 09/17/19 08:38
Prep Initial Wt./Vol.: 260 mL
Prep Extract Vol: 1 mL

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-SW-01-01**

Client Sample ID: **19-ERK-SW-01-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276004
Lab Project ID: 1195276

Collection Date: 09/06/19 16:40
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		09/15/19 05:14
Surrogates								
4-Bromofluorobenzene (surr)	85.2		50-150		%	1		09/15/19 05:14

Batch Information

Analytical Batch: VFC14930
Analytical Method: AK101
Analyst: NRB
Analytical Date/Time: 09/15/19 05:14
Container ID: 1195276004-A

Prep Batch: VXX34873
Prep Method: SW5030B
Prep Date/Time: 09/14/19 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-SW-01-01**

Client Sample ID: **19-ERK-SW-01-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276004
Lab Project ID: 1195276

Collection Date: 09/06/19 16:40
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:40
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		09/17/19 19:40
1,1,2-Trichloroethane	0.200	U	0.400	0.120	ug/L	1		09/17/19 19:40
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:40
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:40
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:40
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:40
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:40
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:40
1,2-Dibromoethane	0.0375	U	0.0750	0.0180	ug/L	1		09/17/19 19:40
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:40
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		09/17/19 19:40
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:40
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:40
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:40
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		09/17/19 19:40
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		09/17/19 19:40
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		09/17/19 19:40
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:40
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		09/17/19 19:40
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:40
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:40
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		09/17/19 19:40
Benzene	0.200	U	0.400	0.120	ug/L	1		09/17/19 19:40
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:40
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:40
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		09/17/19 19:40
Bromoform	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:40
Bromomethane	2.50	U	5.00	1.50	ug/L	1		09/17/19 19:40
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		09/17/19 19:40
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:40
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		09/17/19 19:40
Chloroethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:40
Chloroform	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:40
Chloromethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:40
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:40

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-SW-01-01**

Client Sample ID: **19-ERK-SW-01-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276004
Lab Project ID: 1195276

Collection Date: 09/06/19 16:40
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
cis-1,3-Dichloropropene	0.250 U		0.500	0.150	ug/L	1		09/17/19 19:40
Dibromochloromethane	0.250 U		0.500	0.150	ug/L	1		09/17/19 19:40
Dibromomethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:40
Dichlorodifluoromethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:40
Ethylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:40
Isopropylbenzene (Cumene)	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:40
Methylene chloride	2.50 U		5.00	1.00	ug/L	1		09/17/19 19:40
Methyl-t-butyl ether	5.00 U		10.0	3.10	ug/L	1		09/17/19 19:40
Naphthalene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:40
n-Butylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:40
n-Propylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:40
o-Xylene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:40
P & M -Xylene	1.00 U		2.00	0.620	ug/L	1		09/17/19 19:40
sec-Butylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:40
Styrene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:40
Tetrachloroethene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:40
Toluene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:40
trans-1,2-Dichloroethene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:40
trans-1,3-Dichloropropene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:40
Trichloroethene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:40
Trichlorofluoromethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:40
Vinyl acetate	5.00 U		10.0	3.10	ug/L	1		09/17/19 19:40
Vinyl chloride	0.0750 U		0.150	0.0500	ug/L	1		09/17/19 19:40
Xylenes (total)	1.50 U		3.00	1.00	ug/L	1		09/17/19 19:40
Surrogates								
1,2-Dichloroethane-D4 (surr)	109		81-118		%	1		09/17/19 19:40
4-Bromofluorobenzene (surr)	97		85-114		%	1		09/17/19 19:40
Toluene-d8 (surr)	97.8		89-112		%	1		09/17/19 19:40

Batch Information

Analytical Batch: VMS19458
Analytical Method: EPA 624
Analyst: CMC
Analytical Date/Time: 09/17/19 19:40
Container ID: 1195276004-D

Prep Batch: VXX34911
Prep Method: SW5030B
Prep Date/Time: 09/17/19 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-SW-02-01**

Client Sample ID: **19-ERK-SW-02-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276005
Lab Project ID: 1195276

Collection Date: 09/06/19 17:00
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Acenaphthene	0.0232	U	0.0463	0.0139	ug/L	1		09/27/19 18:52
Acenaphthylene	0.0232	U	0.0463	0.0139	ug/L	1		09/27/19 18:52
Anthracene	0.0232	U	0.0463	0.0139	ug/L	1		09/27/19 18:52
Benzo(a)Anthracene	0.0232	U	0.0463	0.0139	ug/L	1		09/27/19 18:52
Benzo[a]pyrene	0.00925	U	0.0185	0.00574	ug/L	1		09/27/19 18:52
Benzo[b]Fluoranthene	0.0232	U	0.0463	0.0139	ug/L	1		09/27/19 18:52
Benzo[g,h,i]perylene	0.0232	U	0.0463	0.0139	ug/L	1		09/27/19 18:52
Benzo[k]fluoranthene	0.0232	U	0.0463	0.0139	ug/L	1		09/27/19 18:52
Chrysene	0.0232	U	0.0463	0.0139	ug/L	1		09/27/19 18:52
Dibenzo[a,h]anthracene	0.00925	U	0.0185	0.00574	ug/L	1		09/27/19 18:52
Fluoranthene	0.0232	U	0.0463	0.0139	ug/L	1		09/27/19 18:52
Fluorene	0.0232	U	0.0463	0.0139	ug/L	1		09/27/19 18:52
Indeno[1,2,3-c,d] pyrene	0.0232	U	0.0463	0.0139	ug/L	1		09/27/19 18:52
Naphthalene	0.0463	U	0.0926	0.0287	ug/L	1		09/27/19 18:52
Phenanthrene	0.0232	U	0.0463	0.0139	ug/L	1		09/27/19 18:52
Pyrene	0.0232	U	0.0463	0.0139	ug/L	1		09/27/19 18:52
Surrogates								
2-Methylnaphthalene-d10 (surr)	71.8		47-106		%	1		09/27/19 18:52
Fluoranthene-d10 (surr)	69.1		24-116		%	1		09/27/19 18:52

Batch Information

Analytical Batch: XMS11749
Analytical Method: EPA 625M SIM (PAH) LV
Analyst: DSD
Analytical Date/Time: 09/27/19 18:52
Container ID: 1195276005-I

Prep Batch: XXX42232
Prep Method: SW3520C
Prep Date/Time: 09/11/19 08:07
Prep Initial Wt./Vol.: 270 mL
Prep Extract Vol: 1 mL

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-SW-02-01**

Client Sample ID: **19-ERK-SW-02-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276005
Lab Project ID: 1195276

Collection Date: 09/06/19 17:00
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.369	J	0.566	0.170	mg/L	1		09/30/19 15:06
Surrogates								
5a Androstane (surr)	84.1		50-150		%	1		09/30/19 15:06

Batch Information

Analytical Batch: XFC15355
Analytical Method: AK102
Analyst: CMS
Analytical Date/Time: 09/30/19 15:06
Container ID: 1195276005-G

Prep Batch: XXX42280
Prep Method: SW3520C
Prep Date/Time: 09/17/19 08:38
Prep Initial Wt./Vol.: 265 mL
Prep Extract Vol: 1 mL

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-SW-02-01**

Client Sample ID: **19-ERK-SW-02-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276005
Lab Project ID: 1195276

Collection Date: 09/06/19 17:00
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		09/15/19 05:31
Surrogates								
4-Bromofluorobenzene (surr)	87		50-150		%	1		09/15/19 05:31

Batch Information

Analytical Batch: VFC14930
Analytical Method: AK101
Analyst: NRB
Analytical Date/Time: 09/15/19 05:31
Container ID: 1195276005-A

Prep Batch: VXX34873
Prep Method: SW5030B
Prep Date/Time: 09/14/19 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 **f** 907.561.5301 www.us.sgs.com

Results of **19-ERK-SW-02-01**

Client Sample ID: **19-ERK-SW-02-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276005
Lab Project ID: 1195276

Collection Date: 09/06/19 17:00
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:56
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		09/17/19 19:56
1,1,2-Trichloroethane	0.200	U	0.400	0.120	ug/L	1		09/17/19 19:56
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:56
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:56
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:56
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:56
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:56
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:56
1,2-Dibromoethane	0.0375	U	0.0750	0.0180	ug/L	1		09/17/19 19:56
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:56
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		09/17/19 19:56
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:56
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:56
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:56
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		09/17/19 19:56
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		09/17/19 19:56
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		09/17/19 19:56
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:56
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		09/17/19 19:56
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:56
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:56
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		09/17/19 19:56
Benzene	0.200	U	0.400	0.120	ug/L	1		09/17/19 19:56
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:56
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:56
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		09/17/19 19:56
Bromoform	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:56
Bromomethane	2.50	U	5.00	1.50	ug/L	1		09/17/19 19:56
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		09/17/19 19:56
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:56
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		09/17/19 19:56
Chloroethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:56
Chloroform	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:56
Chloromethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:56
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		09/17/19 19:56

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-SW-02-01**

Client Sample ID: **19-ERK-SW-02-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276005
Lab Project ID: 1195276

Collection Date: 09/06/19 17:00
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
cis-1,3-Dichloropropene	0.250 U		0.500	0.150	ug/L	1		09/17/19 19:56
Dibromochloromethane	0.250 U		0.500	0.150	ug/L	1		09/17/19 19:56
Dibromomethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:56
Dichlorodifluoromethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:56
Ethylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:56
Isopropylbenzene (Cumene)	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:56
Methylene chloride	2.50 U		5.00	1.00	ug/L	1		09/17/19 19:56
Methyl-t-butyl ether	5.00 U		10.0	3.10	ug/L	1		09/17/19 19:56
Naphthalene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:56
n-Butylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:56
n-Propylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:56
o-Xylene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:56
P & M -Xylene	1.00 U		2.00	0.620	ug/L	1		09/17/19 19:56
sec-Butylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:56
Styrene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:56
Tetrachloroethene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:56
Toluene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:56
trans-1,2-Dichloroethene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:56
trans-1,3-Dichloropropene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:56
Trichloroethene	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:56
Trichlorofluoromethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 19:56
Vinyl acetate	5.00 U		10.0	3.10	ug/L	1		09/17/19 19:56
Vinyl chloride	0.0750 U		0.150	0.0500	ug/L	1		09/17/19 19:56
Xylenes (total)	1.50 U		3.00	1.00	ug/L	1		09/17/19 19:56
Surrogates								
1,2-Dichloroethane-D4 (surr)	110		81-118		%	1		09/17/19 19:56
4-Bromofluorobenzene (surr)	97.3		85-114		%	1		09/17/19 19:56
Toluene-d8 (surr)	99.2		89-112		%	1		09/17/19 19:56

Batch Information

Analytical Batch: VMS19458
Analytical Method: EPA 624
Analyst: CMC
Analytical Date/Time: 09/17/19 19:56
Container ID: 1195276005-D

Prep Batch: VXX34911
Prep Method: SW5030B
Prep Date/Time: 09/17/19 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-MW-FD-01-01**

Client Sample ID: **19-ERK-MW-FD-01-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276006
Lab Project ID: 1195276

Collection Date: 09/06/19 12:00
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	0.0274	U	0.0548	0.0164	ug/L	1		09/27/19 19:13
2-Methylnaphthalene	0.0274	U	0.0548	0.0164	ug/L	1		09/27/19 19:13
Acenaphthene	0.0274	U	0.0548	0.0164	ug/L	1		09/27/19 19:13
Acenaphthylene	0.0274	U	0.0548	0.0164	ug/L	1		09/27/19 19:13
Anthracene	0.0274	U	0.0548	0.0164	ug/L	1		09/27/19 19:13
Benzo(a)Anthracene	0.0274	U	0.0548	0.0164	ug/L	1		09/27/19 19:13
Benzo[a]pyrene	0.0110	U	0.0219	0.00680	ug/L	1		09/27/19 19:13
Benzo[b]Fluoranthene	0.0274	U	0.0548	0.0164	ug/L	1		09/27/19 19:13
Benzo[g,h,i]perylene	0.0274	U	0.0548	0.0164	ug/L	1		09/27/19 19:13
Benzo[k]fluoranthene	0.0274	U	0.0548	0.0164	ug/L	1		09/27/19 19:13
Chrysene	0.0274	U	0.0548	0.0164	ug/L	1		09/27/19 19:13
Dibenzo[a,h]anthracene	0.0110	U	0.0219	0.00680	ug/L	1		09/27/19 19:13
Fluoranthene	0.0274	U	0.0548	0.0164	ug/L	1		09/27/19 19:13
Fluorene	0.0274	U	0.0548	0.0164	ug/L	1		09/27/19 19:13
Indeno[1,2,3-c,d] pyrene	0.0274	U	0.0548	0.0164	ug/L	1		09/27/19 19:13
Naphthalene	0.0550	U	0.110	0.0340	ug/L	1		09/27/19 19:13
Phenanthrene	0.0274	U	0.0548	0.0164	ug/L	1		09/27/19 19:13
Pyrene	0.0274	U	0.0548	0.0164	ug/L	1		09/27/19 19:13
Surrogates								
2-Methylnaphthalene-d10 (surr)	62.9		47-106		%	1		09/27/19 19:13
Fluoranthene-d10 (surr)	62.7		24-116		%	1		09/27/19 19:13

Batch Information

Analytical Batch: XMS11749
Analytical Method: 8270D SIM LV (PAH)
Analyst: DSD
Analytical Date/Time: 09/27/19 19:13
Container ID: 1195276006-G

Prep Batch: XXX42232
Prep Method: SW3520C
Prep Date/Time: 09/11/19 08:07
Prep Initial Wt./Vol.: 228 mL
Prep Extract Vol: 1 mL

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-MW-FD-01-01**

Client Sample ID: **19-ERK-MW-FD-01-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276006
Lab Project ID: 1195276

Collection Date: 09/06/19 12:00
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	5.28		0.620	0.186	mg/L	1		09/30/19 15:16
Surrogates								
5a Androstane (surr)	85.5		50-150		%	1		09/30/19 15:16

Batch Information

Analytical Batch: XFC15355
Analytical Method: AK102
Analyst: CMS
Analytical Date/Time: 09/30/19 15:16
Container ID: 1195276006-E

Prep Batch: XXX42280
Prep Method: SW3520C
Prep Date/Time: 09/17/19 08:38
Prep Initial Wt./Vol.: 242 mL
Prep Extract Vol: 1 mL

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-MW-FD-01-01**

Client Sample ID: **19-ERK-MW-FD-01-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276006
Lab Project ID: 1195276

Collection Date: 09/06/19 12:00
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		09/15/19 05:49
Surrogates								
4-Bromofluorobenzene (surr)	85.5		50-150		%	1		09/15/19 05:49

Batch Information

Analytical Batch: VFC14930
Analytical Method: AK101
Analyst: NRB
Analytical Date/Time: 09/15/19 05:49
Container ID: 1195276006-A

Prep Batch: VXX34873
Prep Method: SW5030B
Prep Date/Time: 09/14/19 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-MW-FD-01-01**

Client Sample ID: **19-ERK-MW-FD-01-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276006
Lab Project ID: 1195276

Collection Date: 09/06/19 12:00
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		09/17/19 20:11
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:11
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		09/17/19 20:11
1,1,2-Trichloroethane	0.200	U	0.400	0.120	ug/L	1		09/17/19 20:11
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:11
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:11
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:11
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:11
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:11
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:11
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:11
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		09/17/19 20:11
1,2-Dibromoethane	0.0375	U	0.0750	0.0180	ug/L	1		09/17/19 20:11
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:11
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		09/17/19 20:11
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:11
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:11
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:11
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		09/17/19 20:11
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		09/17/19 20:11
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:11
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		09/17/19 20:11
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:11
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		09/17/19 20:11
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:11
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:11
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		09/17/19 20:11
Benzene	0.200	U	0.400	0.120	ug/L	1		09/17/19 20:11
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:11
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:11
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		09/17/19 20:11
Bromoform	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:11
Bromomethane	2.50	U	5.00	1.50	ug/L	1		09/17/19 20:11
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		09/17/19 20:11
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:11
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		09/17/19 20:11

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-MW-FD-01-01**

Client Sample ID: **19-ERK-MW-FD-01-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276006
Lab Project ID: 1195276

Collection Date: 09/06/19 12:00
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:11
Chloroform	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:11
Chloromethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:11
cis-1,2-Dichloroethene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:11
cis-1,3-Dichloropropene	0.250 U		0.500	0.150	ug/L	1		09/17/19 20:11
Dibromochloromethane	0.250 U		0.500	0.150	ug/L	1		09/17/19 20:11
Dibromomethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:11
Dichlorodifluoromethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:11
Ethylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:11
Freon-113	5.00 U		10.0	3.10	ug/L	1		09/17/19 20:11
Hexachlorobutadiene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:11
Isopropylbenzene (Cumene)	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:11
Methylene chloride	2.50 U		5.00	1.00	ug/L	1		09/17/19 20:11
Methyl-t-butyl ether	5.00 U		10.0	3.10	ug/L	1		09/17/19 20:11
Naphthalene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:11
n-Butylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:11
n-Propylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:11
o-Xylene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:11
P & M -Xylene	1.00 U		2.00	0.620	ug/L	1		09/17/19 20:11
sec-Butylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:11
Styrene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:11
tert-Butylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:11
Tetrachloroethene	0.570 J		1.00	0.310	ug/L	1		09/17/19 20:11
Toluene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:11
trans-1,2-Dichloroethene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:11
trans-1,3-Dichloropropene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:11
Trichloroethene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:11
Trichlorofluoromethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:11
Vinyl acetate	5.00 U		10.0	3.10	ug/L	1		09/17/19 20:11
Vinyl chloride	0.0750 U		0.150	0.0500	ug/L	1		09/17/19 20:11
Xylenes (total)	1.50 U		3.00	1.00	ug/L	1		09/17/19 20:11
Surrogates								
1,2-Dichloroethane-D4 (surr)	109		81-118		%	1		09/17/19 20:11
4-Bromofluorobenzene (surr)	99.4		85-114		%	1		09/17/19 20:11
Toluene-d8 (surr)	95.9		89-112		%	1		09/17/19 20:11

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-MW-FD-01-01**

Client Sample ID: **19-ERK-MW-FD-01-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276006
Lab Project ID: 1195276

Collection Date: 09/06/19 12:00
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS19458
Analytical Method: SW8260C
Analyst: CMC
Analytical Date/Time: 09/17/19 20:11
Container ID: 1195276006-C

Prep Batch: VXX34911
Prep Method: SW5030B
Prep Date/Time: 09/17/19 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-SW-FD-01-01**

Client Sample ID: **19-ERK-SW-FD-01-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276007
Lab Project ID: 1195276

Collection Date: 09/06/19 12:00
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Acenaphthene	0.0236	U	0.0472	0.0142	ug/L	1		09/27/19 19:33
Acenaphthylene	0.0236	U	0.0472	0.0142	ug/L	1		09/27/19 19:33
Anthracene	0.0236	U	0.0472	0.0142	ug/L	1		09/27/19 19:33
Benzo(a)Anthracene	0.0236	U	0.0472	0.0142	ug/L	1		09/27/19 19:33
Benzo[a]pyrene	0.00945	U	0.0189	0.00585	ug/L	1		09/27/19 19:33
Benzo[b]Fluoranthene	0.0236	U	0.0472	0.0142	ug/L	1		09/27/19 19:33
Benzo[g,h,i]perylene	0.0236	U	0.0472	0.0142	ug/L	1		09/27/19 19:33
Benzo[k]fluoranthene	0.0236	U	0.0472	0.0142	ug/L	1		09/27/19 19:33
Chrysene	0.0236	U	0.0472	0.0142	ug/L	1		09/27/19 19:33
Dibenzo[a,h]anthracene	0.00945	U	0.0189	0.00585	ug/L	1		09/27/19 19:33
Fluoranthene	0.0236	U	0.0472	0.0142	ug/L	1		09/27/19 19:33
Fluorene	0.0236	U	0.0472	0.0142	ug/L	1		09/27/19 19:33
Indeno[1,2,3-c,d] pyrene	0.0236	U	0.0472	0.0142	ug/L	1		09/27/19 19:33
Naphthalene	0.0471	U	0.0943	0.0292	ug/L	1		09/27/19 19:33
Phenanthrene	0.0236	U	0.0472	0.0142	ug/L	1		09/27/19 19:33
Pyrene	0.0236	U	0.0472	0.0142	ug/L	1		09/27/19 19:33
Surrogates								
2-Methylnaphthalene-d10 (surr)	62.6		47-106		%	1		09/27/19 19:33
Fluoranthene-d10 (surr)	60.6		24-116		%	1		09/27/19 19:33

Batch Information

Analytical Batch: XMS11749
Analytical Method: EPA 625M SIM (PAH) LV
Analyst: DSD
Analytical Date/Time: 09/27/19 19:33
Container ID: 1195276007-I

Prep Batch: XXX42232
Prep Method: SW3520C
Prep Date/Time: 09/11/19 08:07
Prep Initial Wt./Vol.: 265 mL
Prep Extract Vol: 1 mL

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-SW-FD-01-01**

Client Sample ID: **19-ERK-SW-FD-01-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276007
Lab Project ID: 1195276

Collection Date: 09/06/19 12:00
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.464	J	0.610	0.183	mg/L	1		09/30/19 15:26
Surrogates								
5a Androstane (surr)	89.5		50-150		%	1		09/30/19 15:26

Batch Information

Analytical Batch: XFC15355
Analytical Method: AK102
Analyst: CMS
Analytical Date/Time: 09/30/19 15:26
Container ID: 1195276007-G

Prep Batch: XXX42280
Prep Method: SW3520C
Prep Date/Time: 09/17/19 08:38
Prep Initial Wt./Vol.: 246 mL
Prep Extract Vol: 1 mL

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-SW-FD-01-01**

Client Sample ID: **19-ERK-SW-FD-01-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276007
Lab Project ID: 1195276

Collection Date: 09/06/19 12:00
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		09/15/19 06:06
Surrogates								
4-Bromofluorobenzene (surr)	86.1		50-150		%	1		09/15/19 06:06

Batch Information

Analytical Batch: VFC14930
Analytical Method: AK101
Analyst: NRB
Analytical Date/Time: 09/15/19 06:06
Container ID: 1195276007-A

Prep Batch: VXX34873
Prep Method: SW5030B
Prep Date/Time: 09/14/19 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-SW-FD-01-01**

Client Sample ID: **19-ERK-SW-FD-01-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276007
Lab Project ID: 1195276

Collection Date: 09/06/19 12:00
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:26
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		09/17/19 20:26
1,1,2-Trichloroethane	0.200	U	0.400	0.120	ug/L	1		09/17/19 20:26
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:26
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:26
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:26
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:26
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:26
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:26
1,2-Dibromoethane	0.0375	U	0.0750	0.0180	ug/L	1		09/17/19 20:26
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:26
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		09/17/19 20:26
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:26
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:26
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:26
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		09/17/19 20:26
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		09/17/19 20:26
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		09/17/19 20:26
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:26
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		09/17/19 20:26
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:26
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:26
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		09/17/19 20:26
Benzene	0.200	U	0.400	0.120	ug/L	1		09/17/19 20:26
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:26
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:26
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		09/17/19 20:26
Bromoform	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:26
Bromomethane	2.50	U	5.00	1.50	ug/L	1		09/17/19 20:26
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		09/17/19 20:26
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:26
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		09/17/19 20:26
Chloroethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:26
Chloroform	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:26
Chloromethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:26
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:26

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-SW-FD-01-01**

Client Sample ID: **19-ERK-SW-FD-01-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276007
Lab Project ID: 1195276

Collection Date: 09/06/19 12:00
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
cis-1,3-Dichloropropene	0.250 U		0.500	0.150	ug/L	1		09/17/19 20:26
Dibromochloromethane	0.250 U		0.500	0.150	ug/L	1		09/17/19 20:26
Dibromomethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:26
Dichlorodifluoromethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:26
Ethylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:26
Isopropylbenzene (Cumene)	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:26
Methylene chloride	2.50 U		5.00	1.00	ug/L	1		09/17/19 20:26
Methyl-t-butyl ether	5.00 U		10.0	3.10	ug/L	1		09/17/19 20:26
Naphthalene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:26
n-Butylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:26
n-Propylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:26
o-Xylene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:26
P & M -Xylene	1.00 U		2.00	0.620	ug/L	1		09/17/19 20:26
sec-Butylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:26
Styrene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:26
Tetrachloroethene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:26
Toluene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:26
trans-1,2-Dichloroethene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:26
trans-1,3-Dichloropropene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:26
Trichloroethene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:26
Trichlorofluoromethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:26
Vinyl acetate	5.00 U		10.0	3.10	ug/L	1		09/17/19 20:26
Vinyl chloride	0.0750 U		0.150	0.0500	ug/L	1		09/17/19 20:26
Xylenes (total)	1.50 U		3.00	1.00	ug/L	1		09/17/19 20:26
Surrogates								
1,2-Dichloroethane-D4 (surr)	111		81-118		%	1		09/17/19 20:26
4-Bromofluorobenzene (surr)	97.7		85-114		%	1		09/17/19 20:26
Toluene-d8 (surr)	99.1		89-112		%	1		09/17/19 20:26

Batch Information

Analytical Batch: VMS19458
Analytical Method: EPA 624
Analyst: CMC
Analytical Date/Time: 09/17/19 20:26
Container ID: 1195276007-D

Prep Batch: VXX34911
Prep Method: SW5030B
Prep Date/Time: 09/17/19 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-RB-01**

Client Sample ID: **19-ERK-RB-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276008
Lab Project ID: 1195276

Collection Date: 09/06/19 17:15
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Polynuclear Aromatics GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1-Methylnaphthalene	0.0232	U	0.0463	0.0139	ug/L	1		09/27/19 19:54
2-Methylnaphthalene	0.0232	U	0.0463	0.0139	ug/L	1		09/27/19 19:54
Acenaphthene	0.0232	U	0.0463	0.0139	ug/L	1		09/27/19 19:54
Acenaphthylene	0.0232	U	0.0463	0.0139	ug/L	1		09/27/19 19:54
Anthracene	0.0232	U	0.0463	0.0139	ug/L	1		09/27/19 19:54
Benzo(a)Anthracene	0.0232	U	0.0463	0.0139	ug/L	1		09/27/19 19:54
Benzo[a]pyrene	0.00925	U	0.0185	0.00574	ug/L	1		09/27/19 19:54
Benzo[b]Fluoranthene	0.0232	U	0.0463	0.0139	ug/L	1		09/27/19 19:54
Benzo[g,h,i]perylene	0.0232	U	0.0463	0.0139	ug/L	1		09/27/19 19:54
Benzo[k]fluoranthene	0.0232	U	0.0463	0.0139	ug/L	1		09/27/19 19:54
Chrysene	0.0232	U	0.0463	0.0139	ug/L	1		09/27/19 19:54
Dibenzo[a,h]anthracene	0.00925	U	0.0185	0.00574	ug/L	1		09/27/19 19:54
Fluoranthene	0.0232	U	0.0463	0.0139	ug/L	1		09/27/19 19:54
Fluorene	0.0232	U	0.0463	0.0139	ug/L	1		09/27/19 19:54
Indeno[1,2,3-c,d] pyrene	0.0232	U	0.0463	0.0139	ug/L	1		09/27/19 19:54
Naphthalene	0.0463	U	0.0926	0.0287	ug/L	1		09/27/19 19:54
Phenanthrene	0.0232	U	0.0463	0.0139	ug/L	1		09/27/19 19:54
Pyrene	0.0232	U	0.0463	0.0139	ug/L	1		09/27/19 19:54
Surrogates								
2-Methylnaphthalene-d10 (surr)	62.3		47-106		%	1		09/27/19 19:54
Fluoranthene-d10 (surr)	60.2		24-116		%	1		09/27/19 19:54

Batch Information

Analytical Batch: XMS11749
Analytical Method: 8270D SIM LV (PAH)
Analyst: DSD
Analytical Date/Time: 09/27/19 19:54
Container ID: 1195276008-I

Prep Batch: XXX42232
Prep Method: SW3520C
Prep Date/Time: 09/11/19 08:07
Prep Initial Wt./Vol.: 270 mL
Prep Extract Vol: 1 mL

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-RB-01**

Client Sample ID: **19-ERK-RB-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276008
Lab Project ID: 1195276

Collection Date: 09/06/19 17:15
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Semivolatile Organic Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Diesel Range Organics	0.230	J	0.556	0.167	mg/L	1		09/30/19 15:36
Surrogates								
5a Androstane (surr)	88.9		50-150		%	1		09/30/19 15:36

Batch Information

Analytical Batch: XFC15355
Analytical Method: AK102
Analyst: CMS
Analytical Date/Time: 09/30/19 15:36
Container ID: 1195276008-G

Prep Batch: XXX42280
Prep Method: SW3520C
Prep Date/Time: 09/17/19 08:38
Prep Initial Wt./Vol.: 270 mL
Prep Extract Vol: 1 mL

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-RB-01**

Client Sample ID: **19-ERK-RB-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276008
Lab Project ID: 1195276

Collection Date: 09/06/19 17:15
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		09/15/19 06:24
Surrogates								
4-Bromofluorobenzene (surr)	89.1		50-150		%	1		09/15/19 06:24

Batch Information

Analytical Batch: VFC14930
Analytical Method: AK101
Analyst: NRB
Analytical Date/Time: 09/15/19 06:24
Container ID: 1195276008-A

Prep Batch: VXX34873
Prep Method: SW5030B
Prep Date/Time: 09/14/19 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-RB-01**

Client Sample ID: **19-ERK-RB-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276008
Lab Project ID: 1195276

Collection Date: 09/06/19 17:15
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		09/17/19 20:41
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:41
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		09/17/19 20:41
1,1,2-Trichloroethane	0.200	U	0.400	0.120	ug/L	1		09/17/19 20:41
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:41
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:41
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:41
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:41
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:41
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:41
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:41
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		09/17/19 20:41
1,2-Dibromoethane	0.0375	U	0.0750	0.0180	ug/L	1		09/17/19 20:41
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:41
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		09/17/19 20:41
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:41
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:41
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:41
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		09/17/19 20:41
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		09/17/19 20:41
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:41
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		09/17/19 20:41
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:41
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		09/17/19 20:41
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:41
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:41
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		09/17/19 20:41
Benzene	0.200	U	0.400	0.120	ug/L	1		09/17/19 20:41
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:41
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:41
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		09/17/19 20:41
Bromoform	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:41
Bromomethane	2.50	U	5.00	1.50	ug/L	1		09/17/19 20:41
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		09/17/19 20:41
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		09/17/19 20:41
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		09/17/19 20:41

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-RB-01**

Client Sample ID: **19-ERK-RB-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276008
Lab Project ID: 1195276

Collection Date: 09/06/19 17:15
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:41
Chloroform	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:41
Chloromethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:41
cis-1,2-Dichloroethene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:41
cis-1,3-Dichloropropene	0.250 U		0.500	0.150	ug/L	1		09/17/19 20:41
Dibromochloromethane	0.250 U		0.500	0.150	ug/L	1		09/17/19 20:41
Dibromomethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:41
Dichlorodifluoromethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:41
Ethylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:41
Freon-113	5.00 U		10.0	3.10	ug/L	1		09/17/19 20:41
Hexachlorobutadiene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:41
Isopropylbenzene (Cumene)	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:41
Methylene chloride	2.50 U		5.00	1.00	ug/L	1		09/17/19 20:41
Methyl-t-butyl ether	5.00 U		10.0	3.10	ug/L	1		09/17/19 20:41
Naphthalene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:41
n-Butylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:41
n-Propylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:41
o-Xylene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:41
P & M -Xylene	1.00 U		2.00	0.620	ug/L	1		09/17/19 20:41
sec-Butylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:41
Styrene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:41
tert-Butylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:41
Tetrachloroethene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:41
Toluene	1.01		1.00	0.310	ug/L	1		09/17/19 20:41
trans-1,2-Dichloroethene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:41
trans-1,3-Dichloropropene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:41
Trichloroethene	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:41
Trichlorofluoromethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 20:41
Vinyl acetate	5.00 U		10.0	3.10	ug/L	1		09/17/19 20:41
Vinyl chloride	0.0750 U		0.150	0.0500	ug/L	1		09/17/19 20:41
Xylenes (total)	1.50 U		3.00	1.00	ug/L	1		09/17/19 20:41
Surrogates								
1,2-Dichloroethane-D4 (surr)	109		81-118		%	1		09/17/19 20:41
4-Bromofluorobenzene (surr)	99.6		85-114		%	1		09/17/19 20:41
Toluene-d8 (surr)	98.6		89-112		%	1		09/17/19 20:41

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **19-ERK-RB-01**

Client Sample ID: **19-ERK-RB-01**
Client Project ID: **Eureka**
Lab Sample ID: 1195276008
Lab Project ID: 1195276

Collection Date: 09/06/19 17:15
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS19458
Analytical Method: SW8260C
Analyst: CMC
Analytical Date/Time: 09/17/19 20:41
Container ID: 1195276008-D

Prep Batch: VXX34911
Prep Method: SW5030B
Prep Date/Time: 09/17/19 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **Trip Blank**

Client Sample ID: **Trip Blank**
Client Project ID: **Eureka**
Lab Sample ID: 1195276009
Lab Project ID: 1195276

Collection Date: 09/06/19 12:00
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile Fuels**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Gasoline Range Organics	0.0500	U	0.100	0.0310	mg/L	1		09/15/19 04:03
Surrogates								
4-Bromofluorobenzene (surr)	87		50-150		%	1		09/15/19 04:03

Batch Information

Analytical Batch: VFC14930
Analytical Method: AK101
Analyst: NRB
Analytical Date/Time: 09/15/19 04:03
Container ID: 1195276009-A

Prep Batch: VXX34873
Prep Method: SW5030B
Prep Date/Time: 09/14/19 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **Trip Blank**

Client Sample ID: **Trip Blank**
Client Project ID: **Eureka**
Lab Sample ID: 1195276009
Lab Project ID: 1195276

Collection Date: 09/06/19 12:00
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		09/17/19 17:53
1,1,2-Trichloroethane	0.200	U	0.400	0.120	ug/L	1		09/17/19 17:53
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
1,2-Dibromoethane	0.0375	U	0.0750	0.0180	ug/L	1		09/17/19 17:53
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		09/17/19 17:53
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		09/17/19 17:53
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		09/17/19 17:53
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		09/17/19 17:53
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		09/17/19 17:53
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		09/17/19 17:53
Benzene	0.200	U	0.400	0.120	ug/L	1		09/17/19 17:53
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		09/17/19 17:53
Bromoform	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
Bromomethane	2.50	U	5.00	1.50	ug/L	1		09/17/19 17:53
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		09/17/19 17:53
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		09/17/19 17:53
Chloroethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
Chloroform	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
Chloromethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
cis-1,2-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **Trip Blank**

Client Sample ID: **Trip Blank**
Client Project ID: **Eureka**
Lab Sample ID: 1195276009
Lab Project ID: 1195276

Collection Date: 09/06/19 12:00
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
cis-1,3-Dichloropropene	0.250 U		0.500	0.150	ug/L	1		09/17/19 17:53
Dibromochloromethane	0.250 U		0.500	0.150	ug/L	1		09/17/19 17:53
Dibromomethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
Dichlorodifluoromethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
Ethylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
Isopropylbenzene (Cumene)	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
Methylene chloride	2.50 U		5.00	1.00	ug/L	1		09/17/19 17:53
Methyl-t-butyl ether	5.00 U		10.0	3.10	ug/L	1		09/17/19 17:53
Naphthalene	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
n-Butylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
n-Propylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
o-Xylene	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
P & M -Xylene	1.00 U		2.00	0.620	ug/L	1		09/17/19 17:53
sec-Butylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
Styrene	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
Tetrachloroethene	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
Toluene	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
trans-1,2-Dichloroethene	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
trans-1,3-Dichloropropene	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
Trichloroethene	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
Trichlorofluoromethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
Vinyl acetate	5.00 U		10.0	3.10	ug/L	1		09/17/19 17:53
Vinyl chloride	0.0750 U		0.150	0.0500	ug/L	1		09/17/19 17:53
Xylenes (total)	1.50 U		3.00	1.00	ug/L	1		09/17/19 17:53
Surrogates								
1,2-Dichloroethane-D4 (surr)	108		81-118		%	1		09/17/19 17:53
4-Bromofluorobenzene (surr)	97.3		85-114		%	1		09/17/19 17:53
Toluene-d8 (surr)	99.2		89-112		%	1		09/17/19 17:53

Batch Information

Analytical Batch: VMS19458
Analytical Method: EPA 624
Analyst: CMC
Analytical Date/Time: 09/17/19 17:53
Container ID: 1195276009-G

Prep Batch: VXX34911
Prep Method: SW5030B
Prep Date/Time: 09/17/19 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Print Date: 04/03/2020 2:55:03PM

J flagging is activated

Results of **Trip Blank**

Client Sample ID: **Trip Blank**
Client Project ID: **Eureka**
Lab Sample ID: 1195276009
Lab Project ID: 1195276

Collection Date: 09/06/19 12:00
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
1,1,1,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		09/17/19 17:53
1,1,1-Trichloroethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
1,1,2,2-Tetrachloroethane	0.250	U	0.500	0.150	ug/L	1		09/17/19 17:53
1,1,2-Trichloroethane	0.200	U	0.400	0.120	ug/L	1		09/17/19 17:53
1,1-Dichloroethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
1,1-Dichloroethene	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
1,1-Dichloropropene	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
1,2,3-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
1,2,3-Trichloropropane	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
1,2,4-Trichlorobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
1,2,4-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
1,2-Dibromo-3-chloropropane	5.00	U	10.0	3.10	ug/L	1		09/17/19 17:53
1,2-Dibromoethane	0.0375	U	0.0750	0.0180	ug/L	1		09/17/19 17:53
1,2-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
1,2-Dichloroethane	0.250	U	0.500	0.150	ug/L	1		09/17/19 17:53
1,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
1,3,5-Trimethylbenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
1,3-Dichlorobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
1,3-Dichloropropane	0.250	U	0.500	0.150	ug/L	1		09/17/19 17:53
1,4-Dichlorobenzene	0.250	U	0.500	0.150	ug/L	1		09/17/19 17:53
2,2-Dichloropropane	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
2-Butanone (MEK)	5.00	U	10.0	3.10	ug/L	1		09/17/19 17:53
2-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
2-Hexanone	5.00	U	10.0	3.10	ug/L	1		09/17/19 17:53
4-Chlorotoluene	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
4-Isopropyltoluene	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
4-Methyl-2-pentanone (MIBK)	5.00	U	10.0	3.10	ug/L	1		09/17/19 17:53
Benzene	0.200	U	0.400	0.120	ug/L	1		09/17/19 17:53
Bromobenzene	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
Bromochloromethane	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
Bromodichloromethane	0.250	U	0.500	0.150	ug/L	1		09/17/19 17:53
Bromoform	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
Bromomethane	2.50	U	5.00	1.50	ug/L	1		09/17/19 17:53
Carbon disulfide	5.00	U	10.0	3.10	ug/L	1		09/17/19 17:53
Carbon tetrachloride	0.500	U	1.00	0.310	ug/L	1		09/17/19 17:53
Chlorobenzene	0.250	U	0.500	0.150	ug/L	1		09/17/19 17:53

Print Date: 04/03/2020 2:55:03PM

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Results of **Trip Blank**

Client Sample ID: **Trip Blank**
Client Project ID: **Eureka**
Lab Sample ID: 1195276009
Lab Project ID: 1195276

Collection Date: 09/06/19 12:00
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Parameter	Result	Qual	LOQ/CL	DL	Units	DF	Allowable Limits	Date Analyzed
Chloroethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
Chloroform	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
Chloromethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
cis-1,2-Dichloroethene	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
cis-1,3-Dichloropropene	0.250 U		0.500	0.150	ug/L	1		09/17/19 17:53
Dibromochloromethane	0.250 U		0.500	0.150	ug/L	1		09/17/19 17:53
Dibromomethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
Dichlorodifluoromethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
Ethylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
Freon-113	5.00 U		10.0	3.10	ug/L	1		09/17/19 17:53
Hexachlorobutadiene	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
Isopropylbenzene (Cumene)	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
Methylene chloride	2.50 U		5.00	1.00	ug/L	1		09/17/19 17:53
Methyl-t-butyl ether	5.00 U		10.0	3.10	ug/L	1		09/17/19 17:53
Naphthalene	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
n-Butylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
n-Propylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
o-Xylene	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
P & M -Xylene	1.00 U		2.00	0.620	ug/L	1		09/17/19 17:53
sec-Butylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
Styrene	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
tert-Butylbenzene	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
Tetrachloroethene	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
Toluene	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
trans-1,2-Dichloroethene	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
trans-1,3-Dichloropropene	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
Trichloroethene	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
Trichlorofluoromethane	0.500 U		1.00	0.310	ug/L	1		09/17/19 17:53
Vinyl acetate	5.00 U		10.0	3.10	ug/L	1		09/17/19 17:53
Vinyl chloride	0.0750 U		0.150	0.0500	ug/L	1		09/17/19 17:53
Xylenes (total)	1.50 U		3.00	1.00	ug/L	1		09/17/19 17:53
Surrogates								
1,2-Dichloroethane-D4 (surr)	108		81-118		%	1		09/17/19 17:53
4-Bromofluorobenzene (surr)	97.3		85-114		%	1		09/17/19 17:53
Toluene-d8 (surr)	99.2		89-112		%	1		09/17/19 17:53

Print Date: 04/03/2020 2:55:03PM

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Results of **Trip Blank**

Client Sample ID: **Trip Blank**
Client Project ID: **Eureka**
Lab Sample ID: 1195276009
Lab Project ID: 1195276

Collection Date: 09/06/19 12:00
Received Date: 09/09/19 16:33
Matrix: Water (Surface, Eff., Ground)
Solids (%):
Location:

Results by **Volatile GC/MS**

Batch Information

Analytical Batch: VMS19458
Analytical Method: SW8260C
Analyst: CMC
Analytical Date/Time: 09/17/19 17:53
Container ID: 1195276009-G

Prep Batch: VXX34911
Prep Method: SW5030B
Prep Date/Time: 09/17/19 06:00
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

Method Blank

Blank ID: MB for HBN 1799440 [VXX/34873]
Blank Lab ID: 1531862

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1195276001, 1195276002, 1195276003, 1195276004, 1195276005, 1195276006, 1195276007, 1195276008, 1195276009

Results by **AK101**

Parameter	Results	LOQ/CL	DL	Units
Gasoline Range Organics	0.0500U	0.100	0.0310	mg/L
Surrogates				
4-Bromofluorobenzene (surr)	83.9	50-150		%

Batch Information

Analytical Batch: VFC14930
Analytical Method: AK101
Instrument: Agilent 7890 PID/FID
Analyst: NRB
Analytical Date/Time: 9/15/2019 3:28:00AM

Prep Batch: VXX34873
Prep Method: SW5030B
Prep Date/Time: 9/14/2019 6:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1195276 [VXX34873]
Blank Spike Lab ID: 1531863
Date Analyzed: 09/15/2019 03:10

Spike Duplicate ID: LCSD for HBN 1195276 [VXX34873]
Spike Duplicate Lab ID: 1531864
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1195276001, 1195276002, 1195276003, 1195276004, 1195276005, 1195276006, 1195276007, 1195276008, 1195276009

Results by **AK101**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Gasoline Range Organics	1.00	0.945	95	1.00	0.995	100	(60-120)	5.10	(< 20)
Surrogates									
4-Bromofluorobenzene (surr)	0.0500	87.1	87	0.0500	95.5	96	(50-150)	9.30	

Batch Information

Analytical Batch: **VFC14930**
Analytical Method: **AK101**
Instrument: **Agilent 7890 PID/FID**
Analyst: **NRB**

Prep Batch: **VXX34873**
Prep Method: **SW5030B**
Prep Date/Time: **09/14/2019 06:00**
Spike Init Wt./Vol.: 1.00 mg/L Extract Vol: 5 mL
Dupe Init Wt./Vol.: 1.00 mg/L Extract Vol: 5 mL

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Method Blank

Blank ID: MB for HBN 1799650 [VXX/34911]
Blank Lab ID: 1532852

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1195276001, 1195276002, 1195276003, 1195276004, 1195276005, 1195276006, 1195276007, 1195276008, 1195276009

Results by **EPA 624**

Parameter	Results	LOQ/CL	DL	Units
1,1,1,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,1-Trichloroethane	0.500U	1.00	0.310	ug/L
1,1,2,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,2-Trichloroethane	0.200U	0.400	0.120	ug/L
1,1-Dichloroethane	0.500U	1.00	0.310	ug/L
1,1-Dichloroethene	0.500U	1.00	0.310	ug/L
1,1-Dichloropropene	0.500U	1.00	0.310	ug/L
1,2,3-Trichlorobenzene	0.500U	1.00	0.310	ug/L
1,2,3-Trichloropropane	0.500U	1.00	0.310	ug/L
1,2,4-Trichlorobenzene	0.500U	1.00	0.310	ug/L
1,2,4-Trimethylbenzene	0.500U	1.00	0.310	ug/L
1,2-Dibromo-3-chloropropane	5.00U	10.0	3.10	ug/L
1,2-Dibromoethane	0.0375U	0.0750	0.0180	ug/L
1,2-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,2-Dichloroethane	0.250U	0.500	0.150	ug/L
1,2-Dichloropropane	0.500U	1.00	0.310	ug/L
1,3,5-Trimethylbenzene	0.500U	1.00	0.310	ug/L
1,3-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,3-Dichloropropane	0.250U	0.500	0.150	ug/L
1,4-Dichlorobenzene	0.250U	0.500	0.150	ug/L
2,2-Dichloropropane	0.500U	1.00	0.310	ug/L
2-Butanone (MEK)	5.00U	10.0	3.10	ug/L
2-Chlorotoluene	0.500U	1.00	0.310	ug/L
2-Hexanone	5.00U	10.0	3.10	ug/L
4-Chlorotoluene	0.500U	1.00	0.310	ug/L
4-Isopropyltoluene	0.500U	1.00	0.310	ug/L
4-Methyl-2-pentanone (MIBK)	5.00U	10.0	3.10	ug/L
Benzene	0.200U	0.400	0.120	ug/L
Bromobenzene	0.500U	1.00	0.310	ug/L
Bromochloromethane	0.500U	1.00	0.310	ug/L
Bromodichloromethane	0.250U	0.500	0.150	ug/L
Bromoform	0.500U	1.00	0.310	ug/L
Bromomethane	2.50U	5.00	1.50	ug/L
Carbon disulfide	5.00U	10.0	3.10	ug/L
Carbon tetrachloride	0.500U	1.00	0.310	ug/L
Chlorobenzene	0.250U	0.500	0.150	ug/L
Chloroethane	0.500U	1.00	0.310	ug/L
Chloroform	0.500U	1.00	0.310	ug/L

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Method Blank

Blank ID: MB for HBN 1799650 [VXX/34911]
Blank Lab ID: 1532852

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1195276001, 1195276002, 1195276003, 1195276004, 1195276005, 1195276006, 1195276007, 1195276008, 1195276009

Results by **EPA 624**

Parameter	Results	LOQ/CL	DL	Units
Chloromethane	0.500U	1.00	0.310	ug/L
cis-1,2-Dichloroethene	0.500U	1.00	0.310	ug/L
cis-1,3-Dichloropropene	0.250U	0.500	0.150	ug/L
Dibromochloromethane	0.250U	0.500	0.150	ug/L
Dibromomethane	0.500U	1.00	0.310	ug/L
Dichlorodifluoromethane	0.500U	1.00	0.310	ug/L
Ethylbenzene	0.500U	1.00	0.310	ug/L
Freon-113	5.00U	10.0	3.10	ug/L
Hexachlorobutadiene	0.500U	1.00	0.310	ug/L
Isopropylbenzene (Cumene)	0.500U	1.00	0.310	ug/L
Methylene chloride	2.50U	5.00	1.00	ug/L
Methyl-t-butyl ether	5.00U	10.0	3.10	ug/L
Naphthalene	0.500U	1.00	0.310	ug/L
n-Butylbenzene	0.500U	1.00	0.310	ug/L
n-Propylbenzene	0.500U	1.00	0.310	ug/L
o-Xylene	0.500U	1.00	0.310	ug/L
P & M -Xylene	1.00U	2.00	0.620	ug/L
sec-Butylbenzene	0.500U	1.00	0.310	ug/L
Styrene	0.500U	1.00	0.310	ug/L
tert-Butylbenzene	0.500U	1.00	0.310	ug/L
Tetrachloroethene	0.500U	1.00	0.310	ug/L
Toluene	0.500U	1.00	0.310	ug/L
trans-1,2-Dichloroethene	0.500U	1.00	0.310	ug/L
trans-1,3-Dichloropropene	0.500U	1.00	0.310	ug/L
Trichloroethene	0.500U	1.00	0.310	ug/L
Trichlorofluoromethane	0.500U	1.00	0.310	ug/L
Vinyl acetate	5.00U	10.0	3.10	ug/L
Vinyl chloride	0.0750U	0.150	0.0500	ug/L
Xylenes (total)	1.50U	3.00	1.00	ug/L
Surrogates				
1,2-Dichloroethane-D4 (surr)	108	81-118		%
4-Bromofluorobenzene (surr)	97.9	85-114		%
Toluene-d8 (surr)	97.5	89-112		%

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Method Blank

Blank ID: MB for HBN 1799650 [VXX/34911]
Blank Lab ID: 1532852

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1195276001, 1195276002, 1195276003, 1195276004, 1195276005, 1195276006, 1195276007, 1195276008, 1195276009

Results by **EPA 624**

Parameter	Results	LOQ/CL	DL	Units

Batch Information

Analytical Batch: VMS19458
Analytical Method: EPA 624
Instrument: Agilent 7890-75MS
Analyst: CMC
Analytical Date/Time: 9/17/2019 3:10:00PM

Prep Batch: VXX34911
Prep Method: SW5030B
Prep Date/Time: 9/17/2019 6:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1195276 [VXX34911]
Blank Spike Lab ID: 1532853
Date Analyzed: 09/17/2019 15:26

Spike Duplicate ID: LCSD for HBN 1195276 [VXX34911]
Spike Duplicate Lab ID: 1532854
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1195276001, 1195276002, 1195276003, 1195276004, 1195276005, 1195276006, 1195276007, 1195276008, 1195276009

Results by **EPA 624**

	Blank Spike (ug/L)				Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)		Spike	Result	Rec (%)		CL	RPD (%)	RPD CL
1,1,1,2-Tetrachloroethane	30	31.9	106		30	31.0	103		(78-124)	2.70	(< 20)
1,1,1-Trichloroethane	30	34.4	115		30	33.4	111		(74-131)	3.00	(< 20)
1,1,2,2-Tetrachloroethane	30	29.5	98		30	30.1	100		(71-121)	2.20	(< 20)
1,1,2-Trichloroethane	30	30.3	101		30	30.8	103		(80-119)	1.50	(< 20)
1,1-Dichloroethane	30	31.2	104		30	30.3	101		(77-125)	2.70	(< 20)
1,1-Dichloroethene	30	45.6	152	*	30	43.6	145	*	(71-131)	4.50	(< 20)
1,1-Dichloropropene	30	33.5	112		30	31.8	106		(79-125)	5.30	(< 20)
1,2,3-Trichlorobenzene	30	33.6	112		30	32.6	109		(69-129)	3.20	(< 20)
1,2,3-Trichloropropane	30	31.0	103		30	32.3	108		(73-122)	4.10	(< 20)
1,2,4-Trichlorobenzene	30	33.4	111		30	31.8	106		(69-130)	4.70	(< 20)
1,2,4-Trimethylbenzene	30	31.5	105		30	28.9	96		(79-124)	8.80	(< 20)
1,2-Dibromo-3-chloropropane	30	31.8	106		30	33.3	111		(62-128)	4.80	(< 20)
1,2-Dibromoethane	30	29.1	97		30	30.1	100		(77-121)	3.10	(< 20)
1,2-Dichlorobenzene	30	30.7	102		30	29.0	97		(80-119)	5.70	(< 20)
1,2-Dichloroethane	30	31.6	105		30	31.1	104		(73-128)	1.50	(< 20)
1,2-Dichloropropane	30	31.1	104		30	31.2	104		(78-122)	0.32	(< 20)
1,3,5-Trimethylbenzene	30	32.1	107		30	29.6	99		(75-124)	8.10	(< 20)
1,3-Dichlorobenzene	30	31.0	103		30	29.4	98		(80-119)	5.40	(< 20)
1,3-Dichloropropane	30	30.4	101		30	30.6	102		(80-119)	0.69	(< 20)
1,4-Dichlorobenzene	30	30.1	100		30	29.0	97		(79-118)	3.90	(< 20)
2,2-Dichloropropane	30	35.0	117		30	33.6	112		(60-139)	4.10	(< 20)
2-Butanone (MEK)	90	87.2	97		90	92.7	103		(56-143)	6.10	(< 20)
2-Chlorotoluene	30	30.9	103		30	29.1	97		(79-122)	6.00	(< 20)
2-Hexanone	90	88.3	98		90	91.2	101		(57-139)	3.30	(< 20)
4-Chlorotoluene	30	31.5	105		30	29.6	99		(78-122)	6.00	(< 20)
4-Isopropyltoluene	30	31.4	105		30	29.2	97		(77-127)	7.40	(< 20)
4-Methyl-2-pentanone (MIBK)	90	97.5	108		90	99.8	111		(67-130)	2.30	(< 20)
Benzene	30	31.0	103		30	29.9	100		(79-120)	3.60	(< 20)
Bromobenzene	30	31.0	103		30	30.2	101		(80-120)	2.50	(< 20)
Bromochloromethane	30	30.6	102		30	30.8	103		(78-123)	0.72	(< 20)
Bromodichloromethane	30	32.6	109		30	32.7	109		(79-125)	0.25	(< 20)
Bromoform	30	32.8	109		30	33.2	111		(66-130)	1.20	(< 20)
Bromomethane	30	34.9	116		30	40.2	134		(53-141)	14.10	(< 20)

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1195276 [VXX34911]
Blank Spike Lab ID: 1532853
Date Analyzed: 09/17/2019 15:26

Spike Duplicate ID: LCSD for HBN 1195276 [VXX34911]
Spike Duplicate Lab ID: 1532854
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1195276001, 1195276002, 1195276003, 1195276004, 1195276005, 1195276006, 1195276007, 1195276008, 1195276009

Results by **EPA 624**

	Blank Spike (ug/L)				Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)		Spike	Result	Rec (%)		CL	RPD (%)	RPD CL
Carbon disulfide	45	71.7	159	*	45	67.4	150	*	(64-133)	6.30	(< 20)
Carbon tetrachloride	30	35.1	117		30	33.6	112		(72-136)	4.50	(< 20)
Chlorobenzene	30	29.2	97		30	28.8	96		(82-118)	1.60	(< 20)
Chloroethane	30	38.2	127		30	41.5	138		(60-138)	8.40	(< 20)
Chloroform	30	31.9	106		30	31.3	104		(79-124)	1.90	(< 20)
Chloromethane	30	30.3	101		30	29.2	97		(50-139)	3.90	(< 20)
cis-1,2-Dichloroethene	30	31.1	104		30	30.5	102		(78-123)	2.00	(< 20)
cis-1,3-Dichloropropene	30	30.3	101		30	30.2	101		(75-124)	0.36	(< 20)
Dibromochloromethane	30	31.6	105		30	31.5	105		(74-126)	0.16	(< 20)
Dibromomethane	30	31.2	104		30	31.6	105		(79-123)	1.10	(< 20)
Dichlorodifluoromethane	30	37.9	126		30	35.8	119		(32-152)	5.70	(< 20)
Ethylbenzene	30	31.0	103		30	29.6	99		(79-121)	4.80	(< 20)
Freon-113	45	72.7	162	*	45	68.4	152	*	(70-136)	6.20	(< 20)
Hexachlorobutadiene	30	36.3	121		30	33.8	113		(66-134)	7.20	(< 20)
Isopropylbenzene (Cumene)	30	32.0	107		30	29.6	99		(72-131)	7.60	(< 20)
Methylene chloride	30	30.3	101		30	51.5	172	*	(74-124)	51.70	* (< 20)
Methyl-t-butyl ether	45	48.4	108		45	71.1	158	*	(71-124)	37.90	* (< 20)
Naphthalene	30	33.1	110		30	34.0	113		(61-128)	2.60	(< 20)
n-Butylbenzene	30	29.1	97		30	26.6	89		(75-128)	8.90	(< 20)
n-Propylbenzene	30	31.5	105		30	29.2	97		(76-126)	7.50	(< 20)
o-Xylene	30	30.8	103		30	29.5	99		(78-122)	4.20	(< 20)
P & M -Xylene	60	61.9	103		60	59.2	99		(80-121)	4.50	(< 20)
sec-Butylbenzene	30	31.4	105		30	28.6	95		(77-126)	9.40	(< 20)
Styrene	30	31.2	104		30	30.7	102		(78-123)	1.70	(< 20)
tert-Butylbenzene	30	32.0	107		30	29.0	97		(78-124)	9.60	(< 20)
Tetrachloroethene	30	33.0	110		30	30.9	103		(74-129)	6.50	(< 20)
Toluene	30	29.7	99		30	29.0	97		(80-121)	2.50	(< 20)
trans-1,2-Dichloroethene	30	31.3	104		30	48.8	163	*	(75-124)	43.60	* (< 20)
trans-1,3-Dichloropropene	30	30.1	100		30	30.1	100		(73-127)	0.10	(< 20)
Trichloroethene	30	32.1	107		30	31.2	104		(79-123)	2.90	(< 20)
Trichlorofluoromethane	30	40.8	136		30	39.9	133		(65-141)	2.20	(< 20)
Vinyl acetate	30	29.9	100		30	30.2	101		(54-146)	1.00	(< 20)
Vinyl chloride	30	30.5	102		30	29.2	97		(58-137)	4.30	(< 20)

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1195276 [VXX34911]
Blank Spike Lab ID: 1532853
Date Analyzed: 09/17/2019 15:26

Spike Duplicate ID: LCSD for HBN 1195276 [VXX34911]
Spike Duplicate Lab ID: 1532854
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1195276001, 1195276002, 1195276003, 1195276004, 1195276005, 1195276006, 1195276007, 1195276008, 1195276009

Results by **EPA 624**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Xylenes (total)	90	92.7	103	90	88.7	99	(79-121)	4.40	(< 20)
Surrogates									
1,2-Dichloroethane-D4 (surr)	30	103	103	30	102	102	(81-118)	0.94	
4-Bromofluorobenzene (surr)	30	99.3	99	30	98.7	99	(85-114)	0.54	
Toluene-d8 (surr)	30	98.3	98	30	99.6	100	(89-112)	1.30	

Batch Information

Analytical Batch: **VMS19458**
Analytical Method: **EPA 624**
Instrument: **Agilent 7890-75MS**
Analyst: **CMC**

Prep Batch: **VXX34911**
Prep Method: **SW5030B**
Prep Date/Time: **09/17/2019 06:00**
Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL
Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

Print Date: 04/03/2020 2:55:14PM

Method Blank

Blank ID: MB for HBN 1799650 [VXX/34911]
Blank Lab ID: 1532852

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1195276001, 1195276002, 1195276003, 1195276004, 1195276005, 1195276006, 1195276007, 1195276008, 1195276009

Results by **SW8260C**

Parameter	Results	LOQ/CL	DL	Units
1,1,1,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,1-Trichloroethane	0.500U	1.00	0.310	ug/L
1,1,2,2-Tetrachloroethane	0.250U	0.500	0.150	ug/L
1,1,2-Trichloroethane	0.200U	0.400	0.120	ug/L
1,1-Dichloroethane	0.500U	1.00	0.310	ug/L
1,1-Dichloroethene	0.500U	1.00	0.310	ug/L
1,1-Dichloropropene	0.500U	1.00	0.310	ug/L
1,2,3-Trichlorobenzene	0.500U	1.00	0.310	ug/L
1,2,3-Trichloropropane	0.500U	1.00	0.310	ug/L
1,2,4-Trichlorobenzene	0.500U	1.00	0.310	ug/L
1,2,4-Trimethylbenzene	0.500U	1.00	0.310	ug/L
1,2-Dibromo-3-chloropropane	5.00U	10.0	3.10	ug/L
1,2-Dibromoethane	0.0375U	0.0750	0.0180	ug/L
1,2-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,2-Dichloroethane	0.250U	0.500	0.150	ug/L
1,2-Dichloropropane	0.500U	1.00	0.310	ug/L
1,3,5-Trimethylbenzene	0.500U	1.00	0.310	ug/L
1,3-Dichlorobenzene	0.500U	1.00	0.310	ug/L
1,3-Dichloropropane	0.250U	0.500	0.150	ug/L
1,4-Dichlorobenzene	0.250U	0.500	0.150	ug/L
2,2-Dichloropropane	0.500U	1.00	0.310	ug/L
2-Butanone (MEK)	5.00U	10.0	3.10	ug/L
2-Chlorotoluene	0.500U	1.00	0.310	ug/L
2-Hexanone	5.00U	10.0	3.10	ug/L
4-Chlorotoluene	0.500U	1.00	0.310	ug/L
4-Isopropyltoluene	0.500U	1.00	0.310	ug/L
4-Methyl-2-pentanone (MIBK)	5.00U	10.0	3.10	ug/L
Benzene	0.200U	0.400	0.120	ug/L
Bromobenzene	0.500U	1.00	0.310	ug/L
Bromochloromethane	0.500U	1.00	0.310	ug/L
Bromodichloromethane	0.250U	0.500	0.150	ug/L
Bromoform	0.500U	1.00	0.310	ug/L
Bromomethane	2.50U	5.00	1.50	ug/L
Carbon disulfide	5.00U	10.0	3.10	ug/L
Carbon tetrachloride	0.500U	1.00	0.310	ug/L
Chlorobenzene	0.250U	0.500	0.150	ug/L
Chloroethane	0.500U	1.00	0.310	ug/L
Chloroform	0.500U	1.00	0.310	ug/L

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Method Blank

Blank ID: MB for HBN 1799650 [VXX/34911]
Blank Lab ID: 1532852

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1195276001, 1195276002, 1195276003, 1195276004, 1195276005, 1195276006, 1195276007, 1195276008, 1195276009

Results by **SW8260C**

Parameter	Results	LOQ/CL	DL	Units
Chloromethane	0.500U	1.00	0.310	ug/L
cis-1,2-Dichloroethene	0.500U	1.00	0.310	ug/L
cis-1,3-Dichloropropene	0.250U	0.500	0.150	ug/L
Dibromochloromethane	0.250U	0.500	0.150	ug/L
Dibromomethane	0.500U	1.00	0.310	ug/L
Dichlorodifluoromethane	0.500U	1.00	0.310	ug/L
Ethylbenzene	0.500U	1.00	0.310	ug/L
Freon-113	5.00U	10.0	3.10	ug/L
Hexachlorobutadiene	0.500U	1.00	0.310	ug/L
Isopropylbenzene (Cumene)	0.500U	1.00	0.310	ug/L
Methylene chloride	2.50U	5.00	1.00	ug/L
Methyl-t-butyl ether	5.00U	10.0	3.10	ug/L
Naphthalene	0.500U	1.00	0.310	ug/L
n-Butylbenzene	0.500U	1.00	0.310	ug/L
n-Propylbenzene	0.500U	1.00	0.310	ug/L
o-Xylene	0.500U	1.00	0.310	ug/L
P & M -Xylene	1.00U	2.00	0.620	ug/L
sec-Butylbenzene	0.500U	1.00	0.310	ug/L
Styrene	0.500U	1.00	0.310	ug/L
tert-Butylbenzene	0.500U	1.00	0.310	ug/L
Tetrachloroethene	0.500U	1.00	0.310	ug/L
Toluene	0.500U	1.00	0.310	ug/L
trans-1,2-Dichloroethene	0.500U	1.00	0.310	ug/L
trans-1,3-Dichloropropene	0.500U	1.00	0.310	ug/L
Trichloroethene	0.500U	1.00	0.310	ug/L
Trichlorofluoromethane	0.500U	1.00	0.310	ug/L
Vinyl acetate	5.00U	10.0	3.10	ug/L
Vinyl chloride	0.0750U	0.150	0.0500	ug/L
Xylenes (total)	1.50U	3.00	1.00	ug/L
Surrogates				
1,2-Dichloroethane-D4 (surr)	108	81-118		%
4-Bromofluorobenzene (surr)	97.9	85-114		%
Toluene-d8 (surr)	97.5	89-112		%

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Method Blank

Blank ID: MB for HBN 1799650 [VXX/34911]
Blank Lab ID: 1532852

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1195276001, 1195276002, 1195276003, 1195276004, 1195276005, 1195276006, 1195276007, 1195276008, 1195276009

Results by **SW8260C**

Parameter	Results	LOQ/CL	DL	Units

Batch Information

Analytical Batch: VMS19458
Analytical Method: SW8260C
Instrument: Agilent 7890-75MS
Analyst: CMC
Analytical Date/Time: 9/17/2019 3:10:00PM

Prep Batch: VXX34911
Prep Method: SW5030B
Prep Date/Time: 9/17/2019 6:00:00AM
Prep Initial Wt./Vol.: 5 mL
Prep Extract Vol: 5 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1195276 [VXX34911]
Blank Spike Lab ID: 1532853
Date Analyzed: 09/17/2019 15:26

Spike Duplicate ID: LCSD for HBN 1195276 [VXX34911]
Spike Duplicate Lab ID: 1532854
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1195276001, 1195276002, 1195276003, 1195276004, 1195276005, 1195276006, 1195276007, 1195276008, 1195276009

Results by **SW8260C**

	Blank Spike (ug/L)				Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)		Spike	Result	Rec (%)		CL	RPD (%)	RPD CL
1,1,1,2-Tetrachloroethane	30	31.9	106		30	31.0	103		(78-124)	2.70	(< 20)
1,1,1-Trichloroethane	30	34.4	115		30	33.4	111		(74-131)	3.00	(< 20)
1,1,2,2-Tetrachloroethane	30	29.5	98		30	30.1	100		(71-121)	2.20	(< 20)
1,1,2-Trichloroethane	30	30.3	101		30	30.8	103		(80-119)	1.50	(< 20)
1,1-Dichloroethane	30	31.2	104		30	30.3	101		(77-125)	2.70	(< 20)
1,1-Dichloroethene	30	45.6	152	*	30	43.6	145	*	(71-131)	4.50	(< 20)
1,1-Dichloropropene	30	33.5	112		30	31.8	106		(79-125)	5.30	(< 20)
1,2,3-Trichlorobenzene	30	33.6	112		30	32.6	109		(69-129)	3.20	(< 20)
1,2,3-Trichloropropane	30	31.0	103		30	32.3	108		(73-122)	4.10	(< 20)
1,2,4-Trichlorobenzene	30	33.4	111		30	31.8	106		(69-130)	4.70	(< 20)
1,2,4-Trimethylbenzene	30	31.5	105		30	28.9	96		(79-124)	8.80	(< 20)
1,2-Dibromo-3-chloropropane	30	31.8	106		30	33.3	111		(62-128)	4.80	(< 20)
1,2-Dibromoethane	30	29.1	97		30	30.1	100		(77-121)	3.10	(< 20)
1,2-Dichlorobenzene	30	30.7	102		30	29.0	97		(80-119)	5.70	(< 20)
1,2-Dichloroethane	30	31.6	105		30	31.1	104		(73-128)	1.50	(< 20)
1,2-Dichloropropane	30	31.1	104		30	31.2	104		(78-122)	0.32	(< 20)
1,3,5-Trimethylbenzene	30	32.1	107		30	29.6	99		(75-124)	8.10	(< 20)
1,3-Dichlorobenzene	30	31.0	103		30	29.4	98		(80-119)	5.40	(< 20)
1,3-Dichloropropane	30	30.4	101		30	30.6	102		(80-119)	0.69	(< 20)
1,4-Dichlorobenzene	30	30.1	100		30	29.0	97		(79-118)	3.90	(< 20)
2,2-Dichloropropane	30	35.0	117		30	33.6	112		(60-139)	4.10	(< 20)
2-Butanone (MEK)	90	87.2	97		90	92.7	103		(56-143)	6.10	(< 20)
2-Chlorotoluene	30	30.9	103		30	29.1	97		(79-122)	6.00	(< 20)
2-Hexanone	90	88.3	98		90	91.2	101		(57-139)	3.30	(< 20)
4-Chlorotoluene	30	31.5	105		30	29.6	99		(78-122)	6.00	(< 20)
4-Isopropyltoluene	30	31.4	105		30	29.2	97		(77-127)	7.40	(< 20)
4-Methyl-2-pentanone (MIBK)	90	97.5	108		90	99.8	111		(67-130)	2.30	(< 20)
Benzene	30	31.0	103		30	29.9	100		(79-120)	3.60	(< 20)
Bromobenzene	30	31.0	103		30	30.2	101		(80-120)	2.50	(< 20)
Bromochloromethane	30	30.6	102		30	30.8	103		(78-123)	0.72	(< 20)
Bromodichloromethane	30	32.6	109		30	32.7	109		(79-125)	0.25	(< 20)
Bromoform	30	32.8	109		30	33.2	111		(66-130)	1.20	(< 20)
Bromomethane	30	34.9	116		30	40.2	134		(53-141)	14.10	(< 20)

Print Date: 04/03/2020 2:55:19PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1195276 [VXX34911]
Blank Spike Lab ID: 1532853
Date Analyzed: 09/17/2019 15:26

Spike Duplicate ID: LCSD for HBN 1195276 [VXX34911]
Spike Duplicate Lab ID: 1532854
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1195276001, 1195276002, 1195276003, 1195276004, 1195276005, 1195276006, 1195276007, 1195276008, 1195276009

Results by **SW8260C**

	Blank Spike (ug/L)				Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)		Spike	Result	Rec (%)		CL	RPD (%)		RPD CL
Carbon disulfide	45	71.7	159	*	45	67.4	150	*	(64-133)	6.30		(< 20)
Carbon tetrachloride	30	35.1	117		30	33.6	112		(72-136)	4.50		(< 20)
Chlorobenzene	30	29.2	97		30	28.8	96		(82-118)	1.60		(< 20)
Chloroethane	30	38.2	127		30	41.5	138		(60-138)	8.40		(< 20)
Chloroform	30	31.9	106		30	31.3	104		(79-124)	1.90		(< 20)
Chloromethane	30	30.3	101		30	29.2	97		(50-139)	3.90		(< 20)
cis-1,2-Dichloroethene	30	31.1	104		30	30.5	102		(78-123)	2.00		(< 20)
cis-1,3-Dichloropropene	30	30.3	101		30	30.2	101		(75-124)	0.36		(< 20)
Dibromochloromethane	30	31.6	105		30	31.5	105		(74-126)	0.16		(< 20)
Dibromomethane	30	31.2	104		30	31.6	105		(79-123)	1.10		(< 20)
Dichlorodifluoromethane	30	37.9	126		30	35.8	119		(32-152)	5.70		(< 20)
Ethylbenzene	30	31.0	103		30	29.6	99		(79-121)	4.80		(< 20)
Freon-113	45	72.7	162	*	45	68.4	152	*	(70-136)	6.20		(< 20)
Hexachlorobutadiene	30	36.3	121		30	33.8	113		(66-134)	7.20		(< 20)
Isopropylbenzene (Cumene)	30	32.0	107		30	29.6	99		(72-131)	7.60		(< 20)
Methylene chloride	30	30.3	101		30	51.5	172	*	(74-124)	51.70	*	(< 20)
Methyl-t-butyl ether	45	48.4	108		45	71.1	158	*	(71-124)	37.90	*	(< 20)
Naphthalene	30	33.1	110		30	34.0	113		(61-128)	2.60		(< 20)
n-Butylbenzene	30	29.1	97		30	26.6	89		(75-128)	8.90		(< 20)
n-Propylbenzene	30	31.5	105		30	29.2	97		(76-126)	7.50		(< 20)
o-Xylene	30	30.8	103		30	29.5	99		(78-122)	4.20		(< 20)
P & M -Xylene	60	61.9	103		60	59.2	99		(80-121)	4.50		(< 20)
sec-Butylbenzene	30	31.4	105		30	28.6	95		(77-126)	9.40		(< 20)
Styrene	30	31.2	104		30	30.7	102		(78-123)	1.70		(< 20)
tert-Butylbenzene	30	32.0	107		30	29.0	97		(78-124)	9.60		(< 20)
Tetrachloroethene	30	33.0	110		30	30.9	103		(74-129)	6.50		(< 20)
Toluene	30	29.7	99		30	29.0	97		(80-121)	2.50		(< 20)
trans-1,2-Dichloroethene	30	31.3	104		30	48.8	163	*	(75-124)	43.60	*	(< 20)
trans-1,3-Dichloropropene	30	30.1	100		30	30.1	100		(73-127)	0.10		(< 20)
Trichloroethene	30	32.1	107		30	31.2	104		(79-123)	2.90		(< 20)
Trichlorofluoromethane	30	40.8	136		30	39.9	133		(65-141)	2.20		(< 20)
Vinyl acetate	30	29.9	100		30	30.2	101		(54-146)	1.00		(< 20)
Vinyl chloride	30	30.5	102		30	29.2	97		(58-137)	4.30		(< 20)

Print Date: 04/03/2020 2:55:19PM

Blank Spike Summary

Blank Spike ID: LCS for HBN 1195276 [VXX34911]
Blank Spike Lab ID: 1532853
Date Analyzed: 09/17/2019 15:26

Spike Duplicate ID: LCSD for HBN 1195276 [VXX34911]
Spike Duplicate Lab ID: 1532854
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1195276001, 1195276002, 1195276003, 1195276004, 1195276005, 1195276006, 1195276007, 1195276008, 1195276009

Results by **SW8260C**

	Blank Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Xylenes (total)	90	92.7	103	90	88.7	99	(79-121)	4.40	(< 20)
Surrogates									
1,2-Dichloroethane-D4 (surr)	30	103	103	30	102	102	(81-118)	0.94	
4-Bromofluorobenzene (surr)	30	99.3	99	30	98.7	99	(85-114)	0.54	
Toluene-d8 (surr)	30	98.3	98	30	99.6	100	(89-112)	1.30	

Batch Information

Analytical Batch: **VMS19458**
Analytical Method: **SW8260C**
Instrument: **Agilent 7890-75MS**
Analyst: **CMC**

Prep Batch: **VXX34911**
Prep Method: **SW5030B**
Prep Date/Time: **09/17/2019 06:00**
Spike Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL
Dupe Init Wt./Vol.: 30 ug/L Extract Vol: 5 mL

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Method Blank

Blank ID: MB for HBN 1799243 [XXX/42232]
Blank Lab ID: 1531079

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1195276005, 1195276006, 1195276007, 1195276008

Results by **8270D SIM LV (PAH)**

Parameter	Results	LOQ/CL	DL	Units
1-Methylnaphthalene	0.0250U	0.0500	0.0150	ug/L
2-Methylnaphthalene	0.0250U	0.0500	0.0150	ug/L
Acenaphthene	0.0250U	0.0500	0.0150	ug/L
Acenaphthylene	0.0250U	0.0500	0.0150	ug/L
Anthracene	0.0250U	0.0500	0.0150	ug/L
Benzo(a)Anthracene	0.0250U	0.0500	0.0150	ug/L
Benzo[a]pyrene	0.0100U	0.0200	0.00620	ug/L
Benzo[b]Fluoranthene	0.0250U	0.0500	0.0150	ug/L
Benzo[g,h,i]perylene	0.0250U	0.0500	0.0150	ug/L
Benzo[k]fluoranthene	0.0250U	0.0500	0.0150	ug/L
Chrysene	0.0250U	0.0500	0.0150	ug/L
Dibenzo[a,h]anthracene	0.0100U	0.0200	0.00620	ug/L
Fluoranthene	0.0250U	0.0500	0.0150	ug/L
Fluorene	0.0250U	0.0500	0.0150	ug/L
Indeno[1,2,3-c,d] pyrene	0.0250U	0.0500	0.0150	ug/L
Naphthalene	0.0500U	0.100	0.0310	ug/L
Phenanthrene	0.0250U	0.0500	0.0150	ug/L
Pyrene	0.0250U	0.0500	0.0150	ug/L
Surrogates				
2-Methylnaphthalene-d10 (surr)	53.3	47-106		%
Fluoranthene-d10 (surr)	59.9	24-116		%

Batch Information

Analytical Batch: XMS11749
Analytical Method: 8270D SIM LV (PAH)
Instrument: SVA Agilent 780/5975 GC/MS
Analyst: DSD
Analytical Date/Time: 9/27/2019 12:02:00PM

Prep Batch: XXX42232
Prep Method: SW3520C
Prep Date/Time: 9/11/2019 8:07:45AM
Prep Initial Wt./Vol.: 250 mL
Prep Extract Vol: 1 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1195276 [XXX42232]
Blank Spike Lab ID: 1531080
Date Analyzed: 09/27/2019 12:23

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1195276005, 1195276006, 1195276007, 1195276008

Results by **8270D SIM LV (PAH)**

Blank Spike (ug/L)

Parameter	Spike	Result	Rec (%)	CL
1-Methylnaphthalene	2	1.39	69	(41-115)
2-Methylnaphthalene	2	1.31	66	(39-114)
Acenaphthene	2	1.48	74	(48-114)
Acenaphthylene	2	1.61	80	(35-121)
Anthracene	2	1.48	74	(53-119)
Benzo(a)Anthracene	2	1.76	88	(59-120)
Benzo[a]pyrene	2	1.61	80	(53-120)
Benzo[b]Fluoranthene	2	1.75	88	(53-126)
Benzo[g,h,i]perylene	2	1.52	76	(44-128)
Benzo[k]fluoranthene	2	1.59	79	(54-125)
Chrysene	2	1.62	81	(57-120)
Dibenzo[a,h]anthracene	2	1.41	70	(44-131)
Fluoranthene	2	1.55	77	(58-120)
Fluorene	2	1.60	80	(50-118)
Indeno[1,2,3-c,d] pyrene	2	1.63	82	(48-130)
Naphthalene	2	1.32	66	(43-114)
Phenanthrene	2	1.53	77	(53-115)
Pyrene	2	1.62	81	(53-121)
Surrogates				
2-Methylnaphthalene-d10 (surr)	2	56.6	57	(47-106)
Fluoranthene-d10 (surr)	2	63	63	(24-116)

Batch Information

Analytical Batch: **XMS11749**
Analytical Method: **8270D SIM LV (PAH)**
Instrument: **SVA Agilent 780/5975 GC/MS**
Analyst: **DSD**

Prep Batch: **XXX42232**
Prep Method: **SW3520C**
Prep Date/Time: **09/11/2019 08:07**
Spike Init Wt./Vol.: 2 ug/L Extract Vol: 1 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 04/03/2020 2:55:24PM

Matrix Spike Summary

Original Sample ID: 1199740004
MS Sample ID: 1531081 MS
MSD Sample ID: 1531082 MSD

Analysis Date: 09/27/2019 14:26
Analysis Date: 09/27/2019 14:46
Analysis Date: 09/27/2019 15:07
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1195276005, 1195276006, 1195276007, 1195276008

Results by **8270D SIM LV (PAH)**

		Matrix Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1-Methylnaphthalene	0.0245U	1.89	1.5	80	1.89	1.34	71	41-115	11.50	(< 20)
2-Methylnaphthalene	0.0245U	1.89	1.46	77	1.89	1.31	69	39-114	10.80	(< 20)
Acenaphthene	0.0245U	1.89	1.46	78	1.89	1.30	69	48-114	11.60	(< 20)
Acenaphthylene	0.0245U	1.89	1.55	82	1.89	1.37	73	35-121	11.80	(< 20)
Anthracene	0.0245U	1.89	1.47	78	1.89	1.31	69	53-119	11.70	(< 20)
Benzo(a)Anthracene	0.0245U	1.89	1.43	76	1.89	1.28	68	59-120	11.30	(< 20)
Benzo[a]pyrene	0.00980U	1.89	1.32	70	1.89	1.19	63	53-120	10.30	(< 20)
Benzo[b]Fluoranthene	0.0245U	1.89	1.45	77	1.89	1.30	69	53-126	11.20	(< 20)
Benzo[g,h,i]perylene	0.0245U	1.89	1.32	70	1.89	1.17	62	44-128	11.90	(< 20)
Benzo[k]fluoranthene	0.0245U	1.89	1.44	76	1.89	1.27	67	54-125	12.30	(< 20)
Chrysene	0.0245U	1.89	1.45	77	1.89	1.30	69	57-120	10.80	(< 20)
Dibenzo[a,h]anthracene	0.00980U	1.89	1.14	61	1.89	1.01	54	44-131	12.10	(< 20)
Fluoranthene	0.0245U	1.89	1.47	78	1.89	1.31	69	58-120	11.70	(< 20)
Fluorene	0.0245U	1.89	1.53	81	1.89	1.35	71	50-118	13.00	(< 20)
Indeno[1,2,3-c,d] pyrene	0.0245U	1.89	1.37	72	1.89	1.21	64	48-130	11.70	(< 20)
Naphthalene	0.0490U	1.89	1.6	85	1.89	1.43	76	43-114	11.60	(< 20)
Phenanthrene	0.0245U	1.89	1.47	78	1.89	1.30	69	53-115	11.80	(< 20)
Pyrene	0.0245U	1.89	1.54	82	1.89	1.37	73	53-121	11.60	(< 20)
Surrogates										
2-Methylnaphthalene-d10 (surr)		1.89	1.3	69	1.89	1.15	61	47-106	11.60	
Fluoranthene-d10 (surr)		1.89	1.26	67	1.89	1.12	60	24-116	11.50	

Batch Information

Analytical Batch: XMS11749
Analytical Method: 8270D SIM LV (PAH)
Instrument: SVA Agilent 780/5975 GC/MS
Analyst: DSD
Analytical Date/Time: 9/27/2019 2:46:00PM

Prep Batch: XXX42232
Prep Method: 3520 Liq/Liq Ext for 8270 PAH SIM LV
Prep Date/Time: 9/11/2019 8:07:45AM
Prep Initial Wt./Vol.: 265.00mL
Prep Extract Vol: 1.00mL

Print Date: 04/03/2020 2:55:25PM

Method Blank

Blank ID: MB for HBN 1799243 [XXX/42232]
Blank Lab ID: 1531079

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1195276005, 1195276006, 1195276007, 1195276008

Results by **EPA 625M SIM (PAH) LV**

Parameter	Results	LOQ/CL	DL	Units
1-Methylnaphthalene	0.0250U	0.0500	0.0150	ug/L
2-Methylnaphthalene	0.0250U	0.0500	0.0150	ug/L
Acenaphthene	0.0250U	0.0500	0.0150	ug/L
Acenaphthylene	0.0250U	0.0500	0.0150	ug/L
Anthracene	0.0250U	0.0500	0.0150	ug/L
Benzo(a)Anthracene	0.0250U	0.0500	0.0150	ug/L
Benzo[a]pyrene	0.0100U	0.0200	0.00620	ug/L
Benzo[b]Fluoranthene	0.0250U	0.0500	0.0150	ug/L
Benzo[g,h,i]perylene	0.0250U	0.0500	0.0150	ug/L
Benzo[k]fluoranthene	0.0250U	0.0500	0.0150	ug/L
Chrysene	0.0250U	0.0500	0.0150	ug/L
Dibenzo[a,h]anthracene	0.0100U	0.0200	0.00620	ug/L
Fluoranthene	0.0250U	0.0500	0.0150	ug/L
Fluorene	0.0250U	0.0500	0.0150	ug/L
Indeno[1,2,3-c,d] pyrene	0.0250U	0.0500	0.0150	ug/L
Naphthalene	0.0500U	0.100	0.0310	ug/L
Phenanthrene	0.0250U	0.0500	0.0150	ug/L
Pyrene	0.0250U	0.0500	0.0150	ug/L
Surrogates				
2-Methylnaphthalene-d10 (surr)	53.3	47-106		%
Fluoranthene-d10 (surr)	59.9	24-116		%

Batch Information

Analytical Batch: XMS11749
Analytical Method: EPA 625M SIM (PAH) LV
Instrument: SVA Agilent 780/5975 GC/MS
Analyst: DSD
Analytical Date/Time: 9/27/2019 12:02:00PM

Prep Batch: XXX42232
Prep Method: SW3520C
Prep Date/Time: 9/11/2019 8:07:45AM
Prep Initial Wt./Vol.: 250 mL
Prep Extract Vol: 1 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1195276 [XXX42232]
Blank Spike Lab ID: 1531080
Date Analyzed: 09/27/2019 12:23

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1195276005, 1195276006, 1195276007, 1195276008

Results by **EPA 625M SIM (PAH) LV**

Blank Spike (ug/L)

Parameter	Spike	Result	Rec (%)	CL
1-Methylnaphthalene	2	1.39	69	(41-115)
2-Methylnaphthalene	2	1.31	66	(39-114)
Acenaphthene	2	1.48	74	(48-114)
Acenaphthylene	2	1.61	80	(35-121)
Anthracene	2	1.48	74	(53-119)
Benzo(a)Anthracene	2	1.76	88	(59-120)
Benzo[a]pyrene	2	1.61	80	(53-120)
Benzo[b]Fluoranthene	2	1.75	88	(53-126)
Benzo[g,h,i]perylene	2	1.52	76	(44-128)
Benzo[k]fluoranthene	2	1.59	79	(54-125)
Chrysene	2	1.62	81	(57-120)
Dibenzo[a,h]anthracene	2	1.41	70	(44-131)
Fluoranthene	2	1.55	77	(58-120)
Fluorene	2	1.60	80	(50-118)
Indeno[1,2,3-c,d] pyrene	2	1.63	82	(48-130)
Naphthalene	2	1.32	66	(43-114)
Phenanthrene	2	1.53	77	(53-115)
Pyrene	2	1.62	81	(53-121)
Surrogates				
2-Methylnaphthalene-d10 (surr)	2	56.6	57	(47-106)
Fluoranthene-d10 (surr)	2	63	63	(24-116)

Batch Information

Analytical Batch: **XMS11749**
Analytical Method: **EPA 625M SIM (PAH) LV**
Instrument: **SVA Agilent 780/5975 GC/MS**
Analyst: **DSD**

Prep Batch: **XXX42232**
Prep Method: **SW3520C**
Prep Date/Time: **09/11/2019 08:07**
Spike Init Wt./Vol.: 2 ug/L Extract Vol: 1 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 04/03/2020 2:55:29PM

Matrix Spike Summary

Original Sample ID: 1199740004
MS Sample ID: 1531081 MS
MSD Sample ID: 1531082 MSD

Analysis Date: 09/27/2019 14:26
Analysis Date: 09/27/2019 14:46
Analysis Date: 09/27/2019 15:07
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1195276005, 1195276006, 1195276007, 1195276008

Results by **EPA 625M SIM (PAH) LV**

		Matrix Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
1-Methylnaphthalene	0.0245U	1.89	1.5	80	1.89	1.34	71	41-115	11.50	(< 20)
2-Methylnaphthalene	0.0245U	1.89	1.46	77	1.89	1.31	69	39-114	10.80	(< 20)
Acenaphthene	0.0245U	1.89	1.46	78	1.89	1.30	69	48-114	11.60	(< 20)
Acenaphthylene	0.0245U	1.89	1.55	82	1.89	1.37	73	35-121	11.80	(< 20)
Anthracene	0.0245U	1.89	1.47	78	1.89	1.31	69	53-119	11.70	(< 20)
Benzo(a)Anthracene	0.0245U	1.89	1.43	76	1.89	1.28	68	59-120	11.30	(< 20)
Benzo[a]pyrene	0.00980U	1.89	1.32	70	1.89	1.19	63	53-120	10.30	(< 20)
Benzo[b]Fluoranthene	0.0245U	1.89	1.45	77	1.89	1.30	69	53-126	11.20	(< 20)
Benzo[g,h,i]perylene	0.0245U	1.89	1.32	70	1.89	1.17	62	44-128	11.90	(< 20)
Benzo[k]fluoranthene	0.0245U	1.89	1.44	76	1.89	1.27	67	54-125	12.30	(< 20)
Chrysene	0.0245U	1.89	1.45	77	1.89	1.30	69	57-120	10.80	(< 20)
Dibenzo[a,h]anthracene	0.00980U	1.89	1.14	61	1.89	1.01	54	44-131	12.10	(< 20)
Fluoranthene	0.0245U	1.89	1.47	78	1.89	1.31	69	58-120	11.70	(< 20)
Fluorene	0.0245U	1.89	1.53	81	1.89	1.35	71	50-118	13.00	(< 20)
Indeno[1,2,3-c,d] pyrene	0.0245U	1.89	1.37	72	1.89	1.21	64	48-130	11.70	(< 20)
Naphthalene	0.0490U	1.89	1.6	85	1.89	1.43	76	43-114	11.60	(< 20)
Phenanthrene	0.0245U	1.89	1.47	78	1.89	1.30	69	53-115	11.80	(< 20)
Pyrene	0.0245U	1.89	1.54	82	1.89	1.37	73	53-121	11.60	(< 20)
Surrogates										
2-Methylnaphthalene-d10 (surr)		1.89	1.3	69	1.89	1.15	61	47-106	11.60	
Fluoranthene-d10 (surr)		1.89	1.26	67	1.89	1.12	60	24-116	11.50	

Batch Information

Analytical Batch: XMS11749
Analytical Method: EPA 625M SIM (PAH) LV
Instrument: SVA Agilent 780/5975 GC/MS
Analyst: DSD
Analytical Date/Time: 9/27/2019 2:46:00PM

Prep Batch: XXX42232
Prep Method: 3520 Liq/Liq Ext for 8270 PAH SIM LV
Prep Date/Time: 9/11/2019 8:07:45AM
Prep Initial Wt./Vol.: 265.00mL
Prep Extract Vol: 1.00mL

Print Date: 04/03/2020 2:55:31PM

Method Blank

Blank ID: MB for HBN 1799246 [XXX/42235]
Blank Lab ID: 1531090

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1195276001, 1195276002, 1195276003, 1195276004

Results by **8270D SIM LV (PAH)**

Parameter	Results	LOQ/CL	DL	Units
1-Methylnaphthalene	0.0250U	0.0500	0.0150	ug/L
2-Methylnaphthalene	0.0250U	0.0500	0.0150	ug/L
Acenaphthene	0.0250U	0.0500	0.0150	ug/L
Acenaphthylene	0.0250U	0.0500	0.0150	ug/L
Anthracene	0.0250U	0.0500	0.0150	ug/L
Benzo(a)Anthracene	0.0250U	0.0500	0.0150	ug/L
Benzo[a]pyrene	0.0100U	0.0200	0.00620	ug/L
Benzo[b]Fluoranthene	0.0250U	0.0500	0.0150	ug/L
Benzo[g,h,i]perylene	0.0250U	0.0500	0.0150	ug/L
Benzo[k]fluoranthene	0.0250U	0.0500	0.0150	ug/L
Chrysene	0.0250U	0.0500	0.0150	ug/L
Dibenzo[a,h]anthracene	0.0100U	0.0200	0.00620	ug/L
Fluoranthene	0.0250U	0.0500	0.0150	ug/L
Fluorene	0.0250U	0.0500	0.0150	ug/L
Indeno[1,2,3-c,d] pyrene	0.0250U	0.0500	0.0150	ug/L
Naphthalene	0.0500U	0.100	0.0310	ug/L
Phenanthrene	0.0250U	0.0500	0.0150	ug/L
Pyrene	0.0250U	0.0500	0.0150	ug/L
Surrogates				
2-Methylnaphthalene-d10 (surr)	66.8	47-106		%
Fluoranthene-d10 (surr)	76.6	24-116		%

Batch Information

Analytical Batch: XMS11714
Analytical Method: 8270D SIM LV (PAH)
Instrument: Agilent GC 7890B/5977A SWA
Analyst: DSD
Analytical Date/Time: 9/16/2019 7:25:00PM

Prep Batch: XXX42235
Prep Method: SW3520C
Prep Date/Time: 9/11/2019 9:16:18AM
Prep Initial Wt./Vol.: 250 mL
Prep Extract Vol: 1 mL

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Blank Spike Summary

Blank Spike ID: LCS for HBN 1195276 [XXX42235]
Blank Spike Lab ID: 1531091
Date Analyzed: 09/16/2019 19:46

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1195276001, 1195276002, 1195276003, 1195276004

Results by **8270D SIM LV (PAH)**

Blank Spike (ug/L)

Parameter	Spike	Result	Rec (%)	CL
1-Methylnaphthalene	2	1.54	77	(41-115)
2-Methylnaphthalene	2	1.51	76	(39-114)
Acenaphthene	2	1.63	81	(48-114)
Acenaphthylene	2	1.75	87	(35-121)
Anthracene	2	1.86	93	(53-119)
Benzo(a)Anthracene	2	1.74	87	(59-120)
Benzo[a]pyrene	2	1.53	77	(53-120)
Benzo[b]Fluoranthene	2	1.72	86	(53-126)
Benzo[g,h,i]perylene	2	1.37	69	(44-128)
Benzo[k]fluoranthene	2	1.61	80	(54-125)
Chrysene	2	1.77	89	(57-120)
Dibenzo[a,h]anthracene	2	1.25	62	(44-131)
Fluoranthene	2	1.92	96	(58-120)
Fluorene	2	1.82	91	(50-118)
Indeno[1,2,3-c,d] pyrene	2	1.44	72	(48-130)
Naphthalene	2	1.45	72	(43-114)
Phenanthrene	2	1.81	91	(53-115)
Pyrene	2	1.97	98	(53-121)
Surrogates				
2-Methylnaphthalene-d10 (surr)	2	70.5	71	(47-106)
Fluoranthene-d10 (surr)	2	86.3	86	(24-116)

Batch Information

Analytical Batch: **XMS11714**
Analytical Method: **8270D SIM LV (PAH)**
Instrument: **Agilent GC 7890B/5977A SWA**
Analyst: **DSD**

Prep Batch: **XXX42235**
Prep Method: **SW3520C**
Prep Date/Time: **09/11/2019 09:16**
Spike Init Wt./Vol.: 2 ug/L Extract Vol: 1 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 04/03/2020 2:55:36PM

Matrix Spike Summary

Original Sample ID: 1195266001
MS Sample ID: 1531094 MS
MSD Sample ID: 1531095 MSD

Analysis Date: 09/17/2019 1:14
Analysis Date: 09/17/2019 1:35
Analysis Date: 09/17/2019 1:55
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1195276001, 1195276002, 1195276003, 1195276004

Results by **8270D SIM LV (PAH)**

		Matrix Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Acenaphthene	0.0232U	1.85	1.43	77	1.85	1.16	63	48-114	21.10 *	(< 20)
Acenaphthylene	0.0232U	1.85	1.54	83	1.85	1.24	67	35-121	21.70 *	(< 20)
Anthracene	0.0232U	1.85	1.61	87	1.85	1.29	70	53-119	22.30 *	(< 20)
Benzo(a)Anthracene	0.0232U	1.85	1.5	81	1.85	1.20	65	59-120	22.10 *	(< 20)
Benzo[a]pyrene	0.00925U	1.85	1.4	76	1.85	1.10	60	53-120	23.50 *	(< 20)
Benzo[b]Fluoranthene	0.0232U	1.85	1.45	78	1.85	1.17	63	53-126	21.40 *	(< 20)
Benzo[g,h,i]perylene	0.0232U	1.85	1.28	69	1.85	1.02	55	44-128	22.70 *	(< 20)
Benzo[k]fluoranthene	0.0232U	1.85	1.47	79	1.85	1.17	63	54-125	22.80 *	(< 20)
Chrysene	0.0232U	1.85	1.52	82	1.85	1.21	65	57-120	22.70 *	(< 20)
Dibenzo[a,h]anthracene	0.00925U	1.85	1.2	65	1.85	0.948	51	44-131	23.70 *	(< 20)
Fluoranthene	0.0232U	1.85	1.65	89	1.85	1.31	71	58-120	22.70 *	(< 20)
Fluorene	0.0232U	1.85	1.58	85	1.85	1.28	69	50-118	20.90 *	(< 20)
Indeno[1,2,3-c,d] pyrene	0.0232U	1.85	1.36	73	1.85	1.07	58	48-130	23.60 *	(< 20)
Naphthalene	0.0369J	1.85	1.3	68	1.85	1.06	55	43-114	20.50 *	(< 20)
Phenanthrene	0.0193J	1.85	1.56	83	1.85	1.25	67	53-115	22.20 *	(< 20)
Pyrene	0.0232U	1.85	1.69	91	1.85	1.36	73	53-121	21.90 *	(< 20)
Surrogates										
2-Methylnaphthalene-d10 (surr)		1.85	1.24	67	1.85	1.00	54	47-106	21.70	
Fluoranthene-d10 (surr)		1.85	1.48	80	1.85	1.18	64	24-116	22.60	

Batch Information

Analytical Batch: XMS11714
Analytical Method: 8270D SIM LV (PAH)
Instrument: Agilent GC 7890B/5977A SWA
Analyst: DSD
Analytical Date/Time: 9/17/2019 1:35:00AM

Prep Batch: XXX42235
Prep Method: 3520 Liq/Liq Ext for 8270 PAH SIM LV
Prep Date/Time: 9/11/2019 9:16:18AM
Prep Initial Wt./Vol.: 270.00mL
Prep Extract Vol: 1.00mL

Print Date: 04/03/2020 2:55:37PM

Method Blank

Blank ID: MB for HBN 1799246 [XXX/42235]
Blank Lab ID: 1531090

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1195276001, 1195276002, 1195276003, 1195276004

Results by **EPA 625M SIM (PAH) LV**

Parameter	Results	LOQ/CL	DL	Units
1-Methylnaphthalene	0.0250U	0.0500	0.0150	ug/L
2-Methylnaphthalene	0.0250U	0.0500	0.0150	ug/L
Acenaphthene	0.0250U	0.0500	0.0150	ug/L
Acenaphthylene	0.0250U	0.0500	0.0150	ug/L
Anthracene	0.0250U	0.0500	0.0150	ug/L
Benzo(a)Anthracene	0.0250U	0.0500	0.0150	ug/L
Benzo[a]pyrene	0.0100U	0.0200	0.00620	ug/L
Benzo[b]Fluoranthene	0.0250U	0.0500	0.0150	ug/L
Benzo[g,h,i]perylene	0.0250U	0.0500	0.0150	ug/L
Benzo[k]fluoranthene	0.0250U	0.0500	0.0150	ug/L
Chrysene	0.0250U	0.0500	0.0150	ug/L
Dibenzo[a,h]anthracene	0.0100U	0.0200	0.00620	ug/L
Fluoranthene	0.0250U	0.0500	0.0150	ug/L
Fluorene	0.0250U	0.0500	0.0150	ug/L
Indeno[1,2,3-c,d] pyrene	0.0250U	0.0500	0.0150	ug/L
Naphthalene	0.0500U	0.100	0.0310	ug/L
Phenanthrene	0.0250U	0.0500	0.0150	ug/L
Pyrene	0.0250U	0.0500	0.0150	ug/L
Surrogates				
2-Methylnaphthalene-d10 (surr)	66.8	47-106		%
Fluoranthene-d10 (surr)	76.6	24-116		%

Batch Information

Analytical Batch: XMS11714
Analytical Method: EPA 625M SIM (PAH) LV
Instrument: Agilent GC 7890B/5977A SWA
Analyst: DSD
Analytical Date/Time: 9/16/2019 7:25:00PM

Prep Batch: XXX42235
Prep Method: SW3520C
Prep Date/Time: 9/11/2019 9:16:18AM
Prep Initial Wt./Vol.: 250 mL
Prep Extract Vol: 1 mL

SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 **f** 907.561.5301 www.us.sgs.com

Blank Spike Summary

Blank Spike ID: LCS for HBN 1195276 [XXX42235]
Blank Spike Lab ID: 1531091
Date Analyzed: 09/16/2019 19:46

Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1195276001, 1195276002, 1195276003, 1195276004

Results by **EPA 625M SIM (PAH) LV**

Blank Spike (ug/L)

Parameter	Spike	Result	Rec (%)	CL
1-Methylnaphthalene	2	1.54	77	(41-115)
2-Methylnaphthalene	2	1.51	76	(39-114)
Acenaphthene	2	1.63	81	(48-114)
Acenaphthylene	2	1.75	87	(35-121)
Anthracene	2	1.86	93	(53-119)
Benzo(a)Anthracene	2	1.74	87	(59-120)
Benzo[a]pyrene	2	1.53	77	(53-120)
Benzo[b]Fluoranthene	2	1.72	86	(53-126)
Benzo[g,h,i]perylene	2	1.37	69	(44-128)
Benzo[k]fluoranthene	2	1.61	80	(54-125)
Chrysene	2	1.77	89	(57-120)
Dibenzo[a,h]anthracene	2	1.25	62	(44-131)
Fluoranthene	2	1.92	96	(58-120)
Fluorene	2	1.82	91	(50-118)
Indeno[1,2,3-c,d] pyrene	2	1.44	72	(48-130)
Naphthalene	2	1.45	72	(43-114)
Phenanthrene	2	1.81	91	(53-115)
Pyrene	2	1.97	98	(53-121)
Surrogates				
2-Methylnaphthalene-d10 (surr)	2	70.5	71	(47-106)
Fluoranthene-d10 (surr)	2	86.3	86	(24-116)

Batch Information

Analytical Batch: **XMS11714**
Analytical Method: **EPA 625M SIM (PAH) LV**
Instrument: **Agilent GC 7890B/5977A SWA**
Analyst: **DSD**

Prep Batch: **XXX42235**
Prep Method: **SW3520C**
Prep Date/Time: **09/11/2019 09:16**
Spike Init Wt./Vol.: 2 ug/L Extract Vol: 1 mL
Dupe Init Wt./Vol.: Extract Vol:

Print Date: 04/03/2020 2:55:41PM

Matrix Spike Summary

Original Sample ID: 1195266001
MS Sample ID: 1531094 MS
MSD Sample ID: 1531095 MSD

Analysis Date: 09/17/2019 1:14
Analysis Date: 09/17/2019 1:35
Analysis Date: 09/17/2019 1:55
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1195276001, 1195276002, 1195276003, 1195276004

Results by **EPA 625M SIM (PAH) LV**

		Matrix Spike (ug/L)			Spike Duplicate (ug/L)					
Parameter	Sample	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Acenaphthene	0.0232U	1.85	1.43	77	1.85	1.16	63	48-114	21.10 *	(< 20)
Acenaphthylene	0.0232U	1.85	1.54	83	1.85	1.24	67	35-121	21.70 *	(< 20)
Anthracene	0.0232U	1.85	1.61	87	1.85	1.29	70	53-119	22.30 *	(< 20)
Benzo(a)Anthracene	0.0232U	1.85	1.5	81	1.85	1.20	65	59-120	22.10 *	(< 20)
Benzo[a]pyrene	0.00925U	1.85	1.4	76	1.85	1.10	60	53-120	23.50 *	(< 20)
Benzo[b]Fluoranthene	0.0232U	1.85	1.45	78	1.85	1.17	63	53-126	21.40 *	(< 20)
Benzo[g,h,i]perylene	0.0232U	1.85	1.28	69	1.85	1.02	55	44-128	22.70 *	(< 20)
Benzo[k]fluoranthene	0.0232U	1.85	1.47	79	1.85	1.17	63	54-125	22.80 *	(< 20)
Chrysene	0.0232U	1.85	1.52	82	1.85	1.21	65	57-120	22.70 *	(< 20)
Dibenzo[a,h]anthracene	0.00925U	1.85	1.2	65	1.85	0.948	51	44-131	23.70 *	(< 20)
Fluoranthene	0.0232U	1.85	1.65	89	1.85	1.31	71	58-120	22.70 *	(< 20)
Fluorene	0.0232U	1.85	1.58	85	1.85	1.28	69	50-118	20.90 *	(< 20)
Indeno[1,2,3-c,d] pyrene	0.0232U	1.85	1.36	73	1.85	1.07	58	48-130	23.60 *	(< 20)
Naphthalene	0.0369J	1.85	1.3	68	1.85	1.06	55	43-114	20.50 *	(< 20)
Phenanthrene	0.0193J	1.85	1.56	83	1.85	1.25	67	53-115	22.20 *	(< 20)
Pyrene	0.0232U	1.85	1.69	91	1.85	1.36	73	53-121	21.90 *	(< 20)
Surrogates										
2-Methylnaphthalene-d10 (surr)		1.85	1.24	67	1.85	1.00	54	47-106	21.70	
Fluoranthene-d10 (surr)		1.85	1.48	80	1.85	1.18	64	24-116	22.60	

Batch Information

Analytical Batch: XMS11714
Analytical Method: EPA 625M SIM (PAH) LV
Instrument: Agilent GC 7890B/5977A SWA
Analyst: DSD
Analytical Date/Time: 9/17/2019 1:35:00AM

Prep Batch: XXX42235
Prep Method: 3520 Liq/Liq Ext for 8270 PAH SIM LV
Prep Date/Time: 9/11/2019 9:16:18AM
Prep Initial Wt./Vol.: 270.00mL
Prep Extract Vol: 1.00mL

Print Date: 04/03/2020 2:55:42PM

Method Blank

Blank ID: MB for HBN 1799524 [XXX/42280]
Blank Lab ID: 1532207

Matrix: Water (Surface, Eff., Ground)

QC for Samples:
1195276001, 1195276002, 1195276003, 1195276004, 1195276005, 1195276006, 1195276007, 1195276008

Results by **AK102**

Parameter	Results	LOQ/CL	DL	Units
Diesel Range Organics	0.300U	0.600	0.180	mg/L
Surrogates				
5a Androstane (surr)	103	60-120		%

Batch Information

Analytical Batch: XFC15355
Analytical Method: AK102
Instrument: Agilent 7890B F
Analyst: CMS
Analytical Date/Time: 9/30/2019 10:48:00AM

Prep Batch: XXX42280
Prep Method: SW3520C
Prep Date/Time: 9/17/2019 8:38:46AM
Prep Initial Wt./Vol.: 250 mL
Prep Extract Vol: 1 mL

SGS North America Inc.
200 West Potter Drive Anchorage, AK 95518
t 907.562.2343 **f** 907.561.5301 www.us.sgs.com

Blank Spike Summary

Blank Spike ID: LCS for HBN 1195276 [XXX42280]
Blank Spike Lab ID: 1532208
Date Analyzed: 09/30/2019 11:28

Spike Duplicate ID: LCSD for HBN 1195276 [XXX42280]
Spike Duplicate Lab ID: 1532209
Matrix: Water (Surface, Eff., Ground)

QC for Samples: 1195276001, 1195276002, 1195276003, 1195276004, 1195276005, 1195276006, 1195276007, 1195276008

Results by **AK102**

	Blank Spike (mg/L)			Spike Duplicate (mg/L)					
Parameter	Spike	Result	Rec (%)	Spike	Result	Rec (%)	CL	RPD (%)	RPD CL
Diesel Range Organics	20	18.6	93	20	18.5	93	(75-125)	0.33	(< 20)
Surrogates									
5a Androstane (surr)	0.4	97.9	98	0.4	100	100	(60-120)	2.50	

Batch Information

Analytical Batch: **XFC15355**
Analytical Method: **AK102**
Instrument: **Agilent 7890B F**
Analyst: **CMS**

Prep Batch: **XXX42280**
Prep Method: **SW3520C**
Prep Date/Time: **09/17/2019 08:38**
Spike Init Wt./Vol.: 20 mg/L Extract Vol: 1 mL
Dupe Init Wt./Vol.: 20 mg/L Extract Vol: 1 mL

Print Date: 04/03/2020 2:55:47PM

SGS 1195276

SGS North America Inc.
CHAIN OF CUSTODY RECORD

Revised Report - Revision 2

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Instructions: Sections 1 - 5 must be filled out. Omissions may delay the onset of analysis.

Section 1

CLIENT: DNA Environmental, LLC

CONTACT: Dan Frank | PHONE #: 907-350-4897

PROJECT NAME: EUREKA | PROJECT/ PWSID/ PERMIT#:

REPORTS TO: Dan Frank | E-MAIL: daniel.frank@dnaenviro.com | Profile #:

INVOICE TO: DNA Environmental | QUOTE #: 364477 | P.O. #:

Section 3

Preservative: HCl | HCl | None | None | HCL | HCL

Section 2 RESERVED for lab use	SAMPLE IDENTIFICATION	DATE mm/dd/yy	TIME HH:MM	MATRIX/ MATRIX CODE	# CONTAINERS	Comp Grab MI (Multi-incremental)	Analysis* AK101 - GRO	8260C - VOC	AK102 - DRO	8270D SIM - PAH	624 - VOC	625 SIM - PAH					REMARKS/LOC ID
1AF	19-ERK-MW-01-01	9/6/19	13:45	WA	5	Grab	X	X	X	X							
2AG	19-ERK-MW-02-01	9/6/19	16:45	WA	6	Grab	X	X	X	X							
3AE	19-ERK-MW-03-01	9/6/19	15:40	WA	5	Grab	X	X	X	X							
4AJ	19-ERK-SW-01-01	9/6/19	16:40	WA	10	Grab	X		X		X	X					
5AJ	19-ERK-SW-02-01	9/6/19	17:00	WA	10	Grab	X		X		X	X					
6AH	19-ERK-MW-FD-01-01	9/6/19	12:00	WA	8	Grab	X	X	X	X							
7AJ	19-ERK-SW-FD-01-01	9/6/19	12:00	WA	10	Grab	X		X		X	X					
8AJ	19-ERK-RB-01	9/6/19	17:15	WA	10	Grab	X	X	X	X							
9AL																	

NOTE: *The following analyses require specific method and/or compound list: BTEX, Metals, PFAS

Section 5

Relinquished By:	Date	Time	Received By:
(1)	9/9/19		
(2)			
(3)			
(4)	9.9.19	16:33	Received For Laboratory By:

Section 4

DOD Project? Yes No

Cooler ID:

Data Deliverable Requirements: AK SEDD

Requested Turnaround Time and/or Special Instructions:

Profile: 358723 JKJ

Temp Blank °C: 6.0 DSS 3.5 D&T or Ambient [ ] unpacked

Chain of Custody Seal: (Circle) INTACT BROKEN ABSENT

Delivery Method: Hand Delivery [ ] Commerical Delivery [ ]

e-Sample Receipt Form

Revised Report - Revision 2

SGS Workorder #: **1195276**

1195276

Review Criteria	Condition (Yes, No, N/A)	Exceptions Noted below
Chain of Custody / Temperature Requirements		Yes — Exemption permitted if sampler hand carries/delivers.
Were Custody Seals intact? Note # & location	N/A	
COC accompanied samples?	Yes	
DOD: Were samples received in COC corresponding coolers?	N/A	
	N/A	**Exemption permitted if chilled & collected <8 hours ago, or for samples where chilling is not required
Temperature blank compliant* (i.e., 0-6 °C after CF)?	Yes	Cooler ID: 1 @ 6.0 °C Therm. ID: D55
		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
		Cooler ID: @ °C Therm. ID:
If samples received without a temperature blank, the "cooler temperature" will be documented instead & "COOLER TEMP" will be noted to the right. "ambient" or "chilled" will be noted if neither is available.		
If >6°C, were samples collected <8 hours ago?	N/A	
If <0°C, were sample containers ice free?	N/A	
Note: Identify containers received at non-compliant temperature . Use form FS-0029 if more space is needed.		
Holding Time / Documentation / Sample Condition Requirements		Note: Refer to form F-083 "Sample Guide" for specific holding times.
Were samples received within holding time?	Yes	
Do samples **match COC**** (i.e.,sample IDs,dates/times collected)?	No	**Samples 1A-1C,2A-2C,3A-3C,6A-6D arrived on limited VOA vials. Set VOAs as limited volume. More in additional notes.**
**Note: If times differ <1hr, record details & login per COC.		
***Note: If sample information on containers differs from COC, SGS will default to COC information		
Were analytical requests clear? (i.e., method is specified for analyses with multiple option for analysis (Ex: BTEX, Metals)	No	**COC states VOC 624, but VOA samples 4D-4F,5D-5F, and 7D-7F have BTEX 624. Notified a PM and proceeded with COC VOC 624 analysis.**
	N/A	***Exemption permitted for metals (e.g,200.8/6020A).
Were proper containers (type/mass/volume/preservative***)used?	Yes	
Volatile / LL-Hg Requirements		
Were Trip Blanks (i.e., VOAs, LL-Hg) in cooler with samples?	Yes	
Were all water VOA vials free of headspace (i.e., bubbles ≤ 6mm)?	N/A	
Were all soil VOAs field extracted with MeOH+BFB?	N/A	

Note to Client: Any "No", answer above indicates non-compliance with standard procedures and may impact data quality.

Additional notes (if applicable):

VOC samples 1AC,2AC, and 3AC had two GRO and 1 VOC 8260. One GRO was scheduled for VOC 8260 since the VOC required more testing.One container bottle arrived for PAH 8270. Notified a Pm and set as limited volume.

Sample Containers and Preservatives

Container Id	Preservative	Container Condition
1195276001-A	HCL to pH < 2	QN
1195276001-B	HCL to pH < 2	QN
1195276001-C	HCL to pH < 2	OK
1195276001-D	HCL to pH < 2	QN
1195276001-E	HCL to pH < 2	OK
1195276001-F	No Preservative Required	QN
1195276002-A	HCL to pH < 2	QN
1195276002-B	HCL to pH < 2	QN
1195276002-C	HCL to pH < 2	QN
1195276002-D	HCL to pH < 2	OK
1195276002-E	HCL to pH < 2	OK
1195276002-F	No Preservative Required	OK
1195276002-G	No Preservative Required	OK
1195276003-A	HCL to pH < 2	QN
1195276003-B	HCL to pH < 2	QN
1195276003-C	HCL to pH < 2	QN
1195276003-D	HCL to pH < 2	OK
1195276003-E	HCL to pH < 2	OK
1195276003-F	No Preservative Required	OK
1195276003-G	No Preservative Required	OK
1195276004-A	HCL to pH < 2	OK
1195276004-B	HCL to pH < 2	OK
1195276004-C	HCL to pH < 2	OK
1195276004-D	HCL to pH < 2	OK
1195276004-E	HCL to pH < 2	OK
1195276004-F	HCL to pH < 2	OK
1195276004-G	HCL to pH < 2	OK
1195276004-H	HCL to pH < 2	OK
1195276004-I	No Preservative Required	OK
1195276004-J	No Preservative Required	OK
1195276005-A	HCL to pH < 2	OK
1195276005-B	HCL to pH < 2	OK
1195276005-C	HCL to pH < 2	OK
1195276005-D	HCL to pH < 2	OK
1195276005-E	HCL to pH < 2	OK
1195276005-F	HCL to pH < 2	OK
1195276005-G	HCL to pH < 2	OK
1195276005-H	HCL to pH < 2	OK
1195276005-I	No Preservative Required	OK
1195276005-J	No Preservative Required	OK
1195276006-A	HCL to pH < 2	QN
1195276006-B	HCL to pH < 2	QN
1195276006-C	HCL to pH < 2	QN
1195276006-D	HCL to pH < 2	QN
1195276006-E	HCL to pH < 2	OK
1195276006-F	HCL to pH < 2	OK
1195276006-G	No Preservative Required	OK
1195276006-H	No Preservative Required	OK
1195276007-A	HCL to pH < 2	OK
1195276007-B	HCL to pH < 2	OK
1195276007-C	HCL to pH < 2	OK
1195276007-D	HCL to pH < 2	OK
1195276007-E	HCL to pH < 2	OK
1195276007-F	HCL to pH < 2	OK
1195276007-G	HCL to pH < 2	OK
1195276007-H	HCL to pH < 2	OK
1195276007-I	No Preservative Required	OK
1195276007-J	No Preservative Required	OK
1195276008-A	HCL to pH < 2	OK
1195276008-B	HCL to pH < 2	OK
1195276008-C	HCL to pH < 2	OK
1195276008-D	HCL to pH < 2	OK
1195276008-E	HCL to pH < 2	OK
1195276008-F	HCL to pH < 2	OK
1195276008-G	HCL to pH < 2	OK
1195276008-H	HCL to pH < 2	OK
1195276008-I	No Preservative Required	OK
1195276008-J	No Preservative Required	OK
1195276009-A	HCL to pH < 2	OK
1195276009-B	HCL to pH < 2	OK
1195276009-C	HCL to pH < 2	OK
1195276009-D	HCL to pH < 2	OK
1195276009-E	HCL to pH < 2	OK
1195276009-F	HCL to pH < 2	OK
1195276009-G	HCL to pH < 2	OK
1195276009-H	HCL to pH < 2	OK
1195276009-I	HCL to pH < 2	OK

Container Id	Preservative	Container Condition	Container Id	Preservative	Container Condition

Container Condition Glossary

Containers for bacteriological, low level mercury and VOA vials are not opened prior to analysis and will be assigned condition code OK unless evidence indicates than an inappropriate container was submitted.

OK - The container was received at an acceptable pH for the analysis requested.
BU - The container was received with headspace greater than 6mm.
DM - The container was received damaged.
FR - The container was received frozen and not usable for Bacteria or BOD analyses.
IC - The container provided for microbiology analysis was not a laboratory-supplied, pre-sterilized container and therefore was not suitable for analysis.
NC- The container provided was not preserved or was under-preserved. The method does not allow for additional preservative added after collection.
PA - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt and the container is now at the correct pH. See the Sample Receipt Form for details on the amount and lot # of the preservative added.
PH - The container was received outside of the acceptable pH for the analysis requested. Preservative was added upon receipt, but was insufficient to bring the container to the correct pH for the analysis requested. See the Sample Receipt Form for details on the amount and lot # of the preservative added.
QN - Insufficient sample quantity provided.

ATTACHMENT 6

ADEC Checklist and Data Quality Report

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Arctic Data Services

302 Cushman St. #203
Fairbanks, AK 99701
907-457-3147

Date:	4/8/2020
Project name:	Eureka Lodge
Laboratory:	SGS North America, Inc. – Anchorage, Alaska
Sample Delivery Groups:	1195276
Prepared By:	Alexander Thompson
Title:	Chemist
Approved by:	Rodney Guritz
Title:	Principal Chemist

To: Mr. Dan Frank
DNA Environmental, LLC
111 W. 9th Avenue
Anchorage, AK 99501

Data Quality Assessment

This letter summarizes the findings of a data quality assessment (DQA) conducted by Arctic Data Services, LLC (ADS) on behalf of DNA Environmental, LLC (DNA) for the above-referenced project data. Precision, accuracy, sensitivity, representativeness, comparability, and completeness of the data were evaluated by reviewing laboratory-supplied quality assurance/quality control (QA/QC) information as well as conducting independent QC checks on the data. A Stage 2A validation was conducted in general accordance with the US Environmental Protection Agency (USEPA) *National Functional Guidelines for Organic Superfund Methods Data Review* (2017). Stage 2A validation includes reviewing sample handling, custody, and sample-batch-level QC information, applying data qualifiers to sample results affected by anomalies and QC failures, and summarizing the impacts to data quality. This validation meets the requirements of the Alaska Department of Environmental Conservation (ADEC) *Technical Memorandum on Data Quality Objectives, Checklists, Quality Assurance Requirements for Laboratory Data, and Sample Handling* (March 2017). In the absence of project-specific control limits or measurement quality objectives (MQOs), QC-sample recoveries and relative percent differences (RPDs) were compared to laboratory control limits. Field-duplicate RPDs were compared to the ADEC-recommended MQOs.

An ADEC laboratory data review checklist was completed for the single sample delivery group (SDG), and is attached to this DQA. Also attached is a tabular summary of data qualified in the course of this review (Table 1), and a tabular summary of results lacking analytical sensitivity (Table 2). All data qualifiers applied are defined in Table 1. The following sections provide a summary of the findings for each QA/QC element reviewed; anomalies that had no impact to data quality are discussed in the ADEC laboratory data review checklist and are not further described herein.

Sample Analysis Summary

The following summarizes sample data reviewed in this DQA. Samples were submitted in a single SDG to SGS North America, Inc. in Anchorage, Alaska. Field duplicate samples were collected at the required frequency of at least one duplicate per ten project samples; field duplicates are included in the tally of total samples below.

A total of 5 groundwater (GW) samples and 3 surface water (SW) samples (including field QC samples and duplicates) were submitted for analysis of the following:

- Gasoline range organics (GRO) by Alaska Method AK101;
- Diesel range organics (DRO) by Alaska Method AK102;
- Volatile organic compounds (VOCs) by EPA Method 8260C (for GW samples) or EPA Method 624 (for SW samples); and,
- Polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270DSIM (for GW samples) or EPA Method 625 (for SW samples).

Sample Preservation, Handling, Custody, and Holding Times

Sample receipt forms were reviewed to check that samples were received in good condition, properly preserved, and within the required temperature range. Chain of custody forms were reviewed to confirm that custody was not breached during sample handling. Dates of sample collection, preparation, and analysis were compared to check that method holding times were not exceeded.

There were no sample handling, custody or preservation anomalies affecting project-sample data quality. Refer to the attached ADEC laboratory data review checklist for further discussion.

Method Blanks

The laboratory analyzed and reported a method blank (MB) for each preparatory batch, to check for laboratory-based sample contamination. Where analytes were detected in a MB, corresponding project sample results were compared to the MB concentration and qualified in accordance with the *National Functional Guidelines for Organic Superfund Methods Data Review* (USEPA, 2017).

There were no MB detections affecting project-sample data quality.

Trip Blanks

At least one trip blank (TB) was submitted in each cooler containing groundwater samples for volatile analyses (VOCs), to check for cross-contamination of samples during sampling, shipment, or storage. Where analytes were detected in a TB, corresponding project sample results were compared to the TB concentration and qualified in

accordance with the *National Functional Guidelines for Organic Superfund Methods Data Review* (USEPA, 2017), as described above (see *Method Blanks)*.

There were no TB detections affecting project-sample data quality.

Equipment Blanks.

Sample 19-ERK-RB-01 was submitted as an equipment blank (EB) sample, to check for potential cross-contamination of samples from reusable sampling equipment. Surface water samples (-SW) were collected using a direct-dip method, so results are not considered affected by EB contamination. Where analytes were detected in the EB sample, corresponding project sample results were compared to the EB analyte concentration and sample collection chronology and are qualified in accordance with the *National Functional Guidelines for Organic Superfund Methods Data Review* (USEPA, 2017). Corresponding detections below the limit of quantitation (LOQ) in project samples are qualified with a 'UB' flag at the LOQ. Using professional judgement, corresponding detections above the LOQ are flagged as follows. Associated sample results above the LOQ but within 5-times the EB concentration are qualified 'UB' at the detected concentration, as not detected due to laboratory-based sample contamination. Associated sample results above 5-times but within 10-times the EB concentration are qualified 'J+' as estimated, biased high, due to laboratory-based sample contamination. Refer to Table 1 (attached) for a full list of qualified results.

The following EB detections affected project-sample data quality:

- **1195276.** Toluene was detected above the LOQ in the equipment blank sample. DRO was detected below the LOQ in the equipment blank sample. Toluene was not detected in any associated project-sample, so no toluene results are affected. A number of DRO results are affected for various samples; refer to the checklist or Table 1 (attached) for a full list of affected results and the applied qualifier. Impact to data usability was minor for sample 19-ERK-MW-01-01, as this sample had other petroleum-related analytes detected above cleanup levels.

Laboratory Control Samples

The laboratory analyzed and reported a laboratory control sample (LCS) for each preparatory batch, to assess laboratory extraction efficiency and analytical accuracy. In some cases, LCS duplicates (LCSDs) were used to assess analytical precision. LCS and LCSD recovery information and LCS/LCSD RPD information (where available) were reviewed.

There were no LCS/LCSD recovery or RPD failures that affected project-sample data quality; refer to the checklist for further discussion.

Surrogate Recovery

Samples submitted for analysis of organic compounds were spiked with analyte surrogates to evaluate extraction efficiency and to check for matrix interference. Surrogate recoveries were reviewed for each project sample and analysis. Project sample results are not considered affected by surrogate recovery failures if the samples were excessively diluted (a dilution factor of 10 or greater).

There were no surrogate recovery failures affecting project-sample data quality.

Field Duplicates

Field duplicate samples were collected for project samples. The field-duplicate collection frequency met the required minimum frequency of 10% for the sampling event. RPDs were calculated between field duplicate results. In the case where one result was quantitatively detected and the other result was not detected, an RPD was calculated using the LOD for the non-detect result.

There were no field duplicate RPD failures affecting project-sample data quality.

Summary of Data Quality Indicators

The following sections summarize the findings of the above review with respect to the six data quality indicators: sensitivity, precision, accuracy, representativeness, comparability, and completeness. Please note that the evaluation of representativeness, comparability, and completeness is limited to consideration of the analytical data only. Assessment of overall data usability in the context of the project must be conducted by the project team as a whole, taking into account the data quality issues summarized herein and the broader project objectives.

Sensitivity

Sensitivity describes the ability of the sampling and analytical methodology to meet detection and/or quantitation limit objectives. Analytical sensitivity was evaluated by checking that LOQs and limits of detection (LODs) are below relevant cleanup levels where target analytes were not detected. Water sample LOQs and LODs were compared to ADEC 18 AAC 75.345 (October 2018) Table C groundwater cleanup levels (GCLs). Additionally, for surface water samples, LODs for benzene, toluene, ethylbenzene, and xylenes were summed to calculate total aromatic hydrocarbons (TAH) and, and LODs for select PAH analytes were summed to calculated total aqueous hydrocarbons (TAqH), in accordance with the ADEC *Guidelines for Treatment of Non-Detect Values, Data Reduction for Multiple-Detections, and Comparison of Quantitation Limits to Cleanup Values* technical memorandum (April 2017). Calculated TAH and TAqH values were compared to ADEC 18 AAC 70 Water Quality Standards (April 2018) of 10 µg/L (TAH) and 15 µg/L (TAqH).

LODs for VOC analyte 1,2,3-trichloropropane exceeded the GCL for all water samples (see Table 2). Non-detect results where the LOD exceeds the PAL cannot be used to conclusively rule out the potential presence of the analyte at concentrations above the cleanup levels; impact to data usability is minor as 1,2,3-trichloropropane is not a target analyte for this project. No summed LODs for TAH or TAqH exceeded water quality standards. Overall analytical sensitivity is considered adequate for the purposes of this project.

Precision

Precision is a measure of the reproducibility of repetitive measurements. Precision was evaluated based on laboratory QC-sample and field-duplicate sample RPDs. There were no QC-sample of field duplicate sample pair RPD failures affecting data quality. Overall precision was deemed acceptable for purposes of this project.

Accuracy

Accuracy is a measure of the correctness, or the closeness, between the true value and the quantity detected. Accuracy was evaluated based on analyte recoveries for laboratory QC samples and recovery of surrogate spikes for project samples. There were no surrogate recovery failures or QC-sample recovery failures affecting project-sample data quality. Overall, accuracy was deemed acceptable for purposes of this project.

Representativeness

Representativeness describes the degree to which data accurately and precisely represent site characteristics. Representativeness is affected by factors such as sample frequency and matrix or contaminant heterogeneity, as well as analytical performance (including sensitivity, accuracy, precision) and sample cross-contamination. A small number of results were qualified due to a detection in an equipment blank sample. These results are not wholly representative of site-conditions and have been qualified with 'UB' flags as "not-detected," as the result is attributable to equipment-based cross contamination. The impact to data usability is minor. Samples were collected in accordance with an approved work plan, and overall representativeness was deemed acceptable for purposes of this project, with the above noted exceptions taken into account.

Comparability

Comparability describes whether two data sets can be considered equivalent with respect to project goals. Comparability is affected by factors such as sampling methodology and analytical performance (including sensitivity, accuracy, and precision). Comparability was evaluated by checking that standard analytical methods were employed, and analytical performance was acceptable. Overall, project-sample results are deemed generally comparable.

Completeness

Completeness describes the amount of valid data obtained from the sampling event(s). It is calculated as the percentage of valid measurements compared to the total number of measurements. No results were rejected during the course of this review. The dataset is 100% complete, and all results are usable as qualified.

Conclusions

Overall, precision, accuracy, representativeness, comparability, and completeness were deemed acceptable, with the exceptions described above taken into account. Project sample results affected by the QC anomalies described above have been flagged accordingly (see Table 1). The data are usable for the purposes of this project, as qualified.

Limitations

This review was based solely on information provided by the analytical laboratory in the laboratory reports for the SDGs reviewed. ADS did not review instrument-level QC elements, such as calibration verification or internal standard response, except to the extent that the laboratory identified instrument-level anomalies in the case narratives. ADS did not conduct independent recalculations of the data (e.g. recalculating results based on instrument responses) or review any raw chemical data (e.g. chromatograms). ADS makes no warranty, express or implied, of the conclusions presented in this report, or the completeness, accuracy, or validity of third-party information. Further, data quality indicators such as representativeness and comparability are affected by factors beyond the scope of a single analytical dataset; these elements are also dependent on the sampling design and heterogeneity (spatial and temporal) of a given site. Evaluation of these indicators as well as overall completeness of the dataset in the context of project data quality objectives should be conducted by the broader project team. A data quality assessment helps reduce the risk of reliance on data of compromised quality; however, it does not eliminate that risk.

Attachments:

Table 1 - Summary of Qualified Data
Table 2 - Summary of Analytical Sensitivity
ADEC Laboratory Data Review Checklists: 1195276

Table 1
Summary of Qualified Data
Eureka Lodge
Data Quality Assessment

Arctic Data Services, LLC

Lab	SDG	Client Sample ID	Matrix	Method	Analyte	CAS	Units	DL	LOD	LOQ	Result	Lab flags	QC Flags	Note	Final Qualified Result
SGSA	1195276	19-ERK-MW-02-01	Groundwater	AK102	Diesel Range Organics	68334-30-5	mg/L	0.201	0.335	0.67	0.623	J	UB	EB	0.670 UB
SGSA	1195276	19-ERK-MW-03-01	Groundwater	AK102	Diesel Range Organics	68334-30-5	mg/L	0.184	0.308	0.615	0.488	J	UB	EB	0.488 UB

Notes

EB Sampling equipment cross contamination (identified by an EB detection)

Data Qualifiers

UB The result is considered a false-positive detection due to a blank detection.

Definitions

QC quality control
RPD relative percent difference
SDG sample delivery group
CAS Chemical Abstract Service registry number
DL detection limit
LOD limit of detection
LOQ limit of quantitation
SGSA SGS North America, Inc. - Anchorage, AK
EB equipment blank

Table 2
Analytical Sensitivity Summary
Eureka Lodge
Data Quality Assessment

Arctic Data Services, LLC

SDG	Sample ID	Matrix	Method	Analyte	CAS	Units	DL		LOD		LOQ		Lab Flag	PAL
1195276	19-ERK-MW-01-01	Groundwater	8260C	1,2,3-Trichloropropane	96-18-4	µg/L	0.31	*	0.5	*	1	*	ND	0.0075
1195276	19-ERK-MW-02-01	Groundwater	8260C	1,2,3-Trichloropropane	96-18-4	µg/L	0.31	*	0.5	*	1	*	ND	0.0075
1195276	19-ERK-MW-03-01	Groundwater	8260C	1,2,3-Trichloropropane	96-18-4	µg/L	0.31	*	0.5	*	1	*	ND	0.0075
1195276	19-ERK-MW-FD-01-01	Groundwater	8260C	1,2,3-Trichloropropane	96-18-4	µg/L	0.31	*	0.5	*	1	*	ND	0.0075
1195276	19-ERK-SW-01-01	Surface Water	624	1,2,3-Trichloropropane	96-18-4	µg/L	0.31	*	0.5	*	1	*	ND	0.0075
1195276	19-ERK-SW-02-01	Surface Water	624	1,2,3-Trichloropropane	96-18-4	µg/L	0.31	*	0.5	*	1	*	ND	0.0075
1195276	19-ERK-SW-FD-01-01	Surface Water	624	1,2,3-Trichloropropane	96-18-4	µg/L	0.31	*	0.5	*	1	*	ND	0.0075

Notes

SDG sample delivery group
CAS Chemical Abstract Service registry number
DL detection limit
LOD limit of detection
LOQ limit of quantitation
ND non-detect / not detected
PAL project action limit
PALs are the most stringent of the following:
ADEC 18 AAC 75.345 Table C Groundwater cleanup levels (October 2018)
µg/L micrograms per liter

Laboratory Data Review Checklist

Completed By:

Alex Thompson

Title:

Chemist

Date:

March 26, 2020

Consultant Firm:

Arctic Data Services, LLC for DNA Environmental, LLC

Laboratory Name:

SGS North America, Inc. – Anchorage, AK

Laboratory Report Number:

1195276

Laboratory Report Date:

October 2, 2019

CS Site Name:

Eureka Lodge

ADEC File Number:

210.38.006

Hazard Identification Number:

25595

Note: Any N/A or No box checked must have an explanation in the comments box.

1. Laboratory

   a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

   Yes☒ No☐ N/A☐ Comments:

All samples were received and analyzed by SGS North America, Inc. in Anchorage, Alaska.

   b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

   Yes☐ No☐ N/A☒ Comments:

No samples were transferred to another laboratory.

2. Chain of Custody (CoC)

   a. CoC information completed, signed, and dated (including released/received by)?

   Yes☒ No☐ N/A☐ Comments:

   b. Correct analyses requested?

   Yes☒ No☐ N/A☐ Comments:

Groundwater samples (-MW) were analyzed by EPA methods 8260C for VOCs and 8270DSIM for PAHs. Surface water samples (-SW) were analyzed by equivalent EPA Methods 624 for VOCs and 625 SIM for PAHs.

3. Laboratory Sample Receipt Documentation

   a. Sample/cooler temperature documented and within range at receipt (0° to 6° C)?

   Yes☒ No☐ N/A☐ Comments:

The sample cooler was hand delivered to the laboratory within the acceptable temperature range, at 6.0 °C.

   b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

   Yes☒ No☐ N/A☐ Comments:

   c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

   Yes☐ No☐ N/A☒ Comments:

Samples were received in good condition.

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

Yes☒ No☐ N/A☐ Comments:

The laboratory noted that VOA containers for samples 19-ERK-SW-01-01, 19-ERK-SW-02-01 and 19-ERK-SW-FD-01-01 were labelled for BTEX analysis by 624. The laboratory analyzed for full suite VOCs for these samples, in accordance with the COC.
The laboratory also notes that limited volume was submitted for volatile analysis for samples 19-ERK-MW-01-01, 19-ERK-MW-02-01, 19-ERK-MW-03-01, and 19-ERK-MW-FD-01-01. A limited volume was also received for the PAH analysis of sample 19ERK-MW-01-01. Adequate volume was submitted for the laboratory to perform all requested analyses; data quality was not affected.
The laboratory issued a revised report to remove RRO results from the report, as the client had not requested RRO analysis.

e. Data quality or usability affected?

Comments:

Data quality and usability were not affected.

4. Case Narrative

a. Present and understandable?

Yes☒ No☐ N/A☐ Comments:

b. Discrepancies, errors, or QC failures identified by the lab?

Yes☒ No☐ N/A☐ Comments:

The laboratory case narrative reports a number of batch level QC anomalies that are addressed in the following sections of this checklist. The laboratory did not document any instrument level QC anomalies.

c. Were all corrective actions documented?

Yes☐ No☐ N/A☒ Comments:

No corrective actions were performed.

d. What is the effect on data quality/usability according to the case narrative?

Comments:

Data quality and usability were not affected.

5. Samples Results

a. Correct analyses performed/reported as requested on COC?

Yes☒ No☐ N/A☐ Comments:

b. All applicable holding times met?

Yes☒ No☐ N/A☐ Comments:

c. All soils reported on a dry weight basis?

Yes☐ No☐ N/A☒ Comments:

No soil samples were submitted in this work order.

d. Are the reported LOQs less than the Cleanup Level or the minimum required detection level for the project?

Yes☐ No☒ N/A☐ Comments:

LODs and LOQs were compared to the ADEC 18 AAC 75.345 Table C groundwater cleanup levels, and summed total aromatic hydrocarbons and total aqueous hydrocarbons were calculated and compared to the ADEC 18 AAC 70 Water Quality Criteria. 1,2,3-Trichloropropane (1,2,3-TCP) had LODs and LOQs exceeding groundwater cleanup levels for all samples; refer to Table 2 of the DQA for details. No summed LODs for TAH or TAqH exceeded the water quality criteria.

e. Data quality or usability affected?

Data quality is not affected. Results where the LOD exceeds the PAL cannot be used to conclusively rule out the potential presence of the analyte above cleanup levels. Impact to data usability was minor as 1,2,3-TCP was not a target analyte for this project.

6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

Yes☒ No☐ N/A☐ Comments:

ii. All method blank results less than limit of quantitation (LOQ) or project specified objectives?

Yes☒ No☐ N/A☐ Comments:

No analytes were detected in method blank samples.

iii. If above LOQ or project specified objectives, what samples are affected?

Comments:

No samples were affected; see above.

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes☐ No☐ N/A☒ Comments:

NA; see above.

v. Data quality or usability affected?

Comments:

Data quality and usability were not affected.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

Yes☒ No☐ N/A☐ Comments:

An LCS and LCSD were analyzed for each preparatory batch for Alaska Methods.
An LCS was analyzed for each preparatory batch for EPA SW846 Methods.

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes☐ No☐ N/A☒ Comments:

No metals/inorganic analyses were performed in this work order.

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

Yes☐ No☒ N/A☐ Comments:

A large number of analytes were recovered above laboratory control limits in the 8260C/624 prep batch VXX34911. See the table below for a full list of affected results.

Method	Method Batch	Prep Batch	QC	Analyte	%R	LCL	UCL	Recovery
624	VXX34911	VXX34911	LCS	1,1-Dichloroethene	152	71	131	High
624	VXX34911	VXX34911	LCSD	1,1-Dichloroethene	145	71	131	High
8260C	VXX34911	VXX34911	LCS	1,1-Dichloroethene	152	71	131	High
8260C	VXX34911	VXX34911	LCSD	1,1-Dichloroethene	145	71	131	High
624	VXX34911	VXX34911	LCS	Carbon disulfide	159	64	133	High
624	VXX34911	VXX34911	LCSD	Carbon disulfide	150	64	133	High
8260C	VXX34911	VXX34911	LCS	Carbon disulfide	159	64	133	High
8260C	VXX34911	VXX34911	LCSD	Carbon disulfide	150	64	133	High
624	VXX34911	VXX34911	LCS	Freon-113	162	70	136	High
624	VXX34911	VXX34911	LCSD	Freon-113	152	70	136	High
8260C	VXX34911	VXX34911	LCS	Freon-113	162	70	136	High
8260C	VXX34911	VXX34911	LCSD	Freon-113	152	70	136	High
624	VXX34911	VXX34911	LCSD	Methylene chloride	172	74	124	High
8260C	VXX34911	VXX34911	LCSD	Methylene chloride	172	74	124	High
624	VXX34911	VXX34911	LCSD	Methyl-t-butyl ether	158	71	124	High
8260C	VXX34911	VXX34911	LCSD	Methyl-t-butyl ether	158	71	124	High
624	VXX34911	VXX34911	LCSD	trans-1,2-Dichloroethene	163	75	124	High
8260C	VXX34911	VXX34911	LCSD	trans-1,2-Dichloroethene	163	75	124	High

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from LCS/LCSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes☐ No☒ N/A☐ Comments:

A number of analytes with failing recoveries also had RPDs outside of laboratory control limits. See the table below for further information.

Method	Prep Batch	Analyte	RPD	RPD Lim.	RPD test
624	VXX34911	Methylene chloride	52	20	RPD Fail
8260C	VXX34911	Methylene chloride	52	20	RPD Fail
624	VXX34911	Methyl-t-butyl ether	38	20	RPD Fail
8260C	VXX34911	Methyl-t-butyl ether	38	20	RPD Fail
624	VXX34911	trans-1,2-Dichloroethene	44	20	RPD Fail
8260C	VXX34911	trans-1,2-Dichloroethene	44	20	RPD Fail

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

None of the analytes with failing recoveries or RPDs were detected in associated project-samples, so no results are considered affected.

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes☐ No☐ N/A☒ Comments:

NA; see above.

vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

Data quality and usability were not affected.

c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Note: Leave blank if not required for project

i. Organics – One MS/MSD reported per matrix, analysis and 20 samples?

Yes☐ No☐ N/A☒ Comments:

Project-specific MS/MSDs were not required for the project, and no project-specific MS/MSDs were reported.

ii. Metals/Inorganics – one MS and one MSD reported per matrix, analysis and 20 samples?

Yes☐ No☐ N/A☒ Comments:

No metals/inorganic analyses were performed in this work order.

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

Yes☐ No☐ N/A☒ Comments:

See above.

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes☐ No☐ N/A☒ Comments:

See above.

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

NA; see above.

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes☐ No☐ N/A☒ Comments:

See above.

vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

Data quality and usability were not affected.

d. Surrogates – Organics Only or Isotope Dilution Analytes (IDA) – Isotope Dilution Methods Only

i. Are surrogate/IDA recoveries reported for organic analyses – field, QC and laboratory samples?

Yes☒ No☐ N/A☐ Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

Yes☐ No☒ N/A☐ Comments:

The AK102 surrogate n-triacontane was recovered outside of laboratory limits in the method blank sample associated with prep batch XXX42280. All surrogate recoveries for project samples were within limits, so project-sample data quality was not affected.

iii. Do the sample results with failed surrogate/IDA recoveries have data flags? If so, are the data flags clearly defined?

Yes☐ No☐ N/A☒ Comments:

No samples are considered affected, see above.

iv. Data quality or usability affected?

Comments:

Data quality and usability were not affected.

e. Trip Blanks

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.)

Yes☒ No☐ N/A☐ Comments:

Sample Trip Blank was analyzed for GRO and VOCs.

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)

Yes☒ No☐ N/A☐ Comments:

Samples were submitted in a single cooler.

iii. All results less than LOQ and project specified objectives?

Yes☐ No☐ N/A☐ Comments:

No analytes were detected in the trip blank sample.

iv. If above LOQ or project specified objectives, what samples are affected?

Comments:

NA; see above.

v. Data quality or usability affected?

Comments:

Data quality and usability were not affected.

f. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

Yes☒ No☐ N/A☐ Comments:

Sample 19-ERK-MW-FD-01-01 was submitted as a field duplicate of 19-ERK-MW-01-01. Sample 19-ERK-SW-FD-01-01 was submitted as a field duplicate of 19-ERK-SW-01-01.

ii. Submitted blind to lab?

Yes☐ No☒ N/A☐ Comments:

Field duplicate sample IDs were labeled with an '-FD', however no indication is given to the associated primary sample.

iii. Precision – All relative percent differences (RPD) less than specified project objectives? (Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute value of: } \frac{(R_1-R_2)}{((R_1+R_2)/2)} \times 100$$

Where R_1 = Sample Concentration
R_2 = Field Duplicate Concentration

Yes☒ No☐ N/A☐ Comments:

There were no field duplicate RPD failures.

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

Data quality and usability were not affected.

g. Decontamination or Equipment Blank (If not applicable, a comment stating why must be entered below)?

Yes☒ No☐ N/A☐ Comments:

Sample 19-ERK-RB-01 was submitted as an equipment blank for groundwater samples in this work order.

i. All results less than LOQ and project specified objectives?

Yes☐ No☒ N/A☐ Comments:

Toluene was detected above the LOQ in the equipment blank sample, however, toluene was not detected in any associated samples. DRO was detected below the LOQ.

ii. If above LOQ or project specified objectives, what samples are affected?

Comments:

Project-sample results are generally considered affected if the analyte in question is detected within ten times the equipment blank sample, depending on sample collection chronology and professional judgment. Refer to the table below for a full list of affected results.

Method	Analyte	Units	Sample ID	Result	LOQ	Flag	collected
AK102	Diesel Range Organics	mg/L	19-ERK-MW-03-01	0.488 J	0.615	UB	9/6/2019 15:40
AK102	Diesel Range Organics	mg/L	19-ERK-MW-02-01	0.623 J	0.67	UB	9/6/2019 16:45

iii. Data quality or usability affected?

Comments:

Associated sample results below the LOQ are qualified ‘UB’ at the LOQ, as not detected due to equipment-based sample contamination.
Associated sample results above the LOQ but within 5x the EB concentration are qualified ‘UB’ at the detected concentration, as not detected due to equipment-based sample contamination.
Associated sample results above 5x but within 10x the EB concentration are qualified ‘J+’ as estimated, biased high, due to equipment-based sample contamination.
Impact to data usability was minor for sample 19-ERK-MW-01-01, as this sample had other petroleum-related analytes detected above cleanup levels. RRO results for samples 19-ERK-MW-02-01 and 19-ERK-MW-FD-01-01 are of limited usefulness and should be used with caution as the results are only marginally above the GCL (1.1 mg/L) and are affected by a high bias from equipment-based sample contamination, or may be wholly attributable to equipment-based sample contamination.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Defined and appropriate?

Yes☐ No☐ N/A☒ Comments:

There were no additional qualifiers/flags applied by the laboratory.